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**Federal Aviation
Administration**

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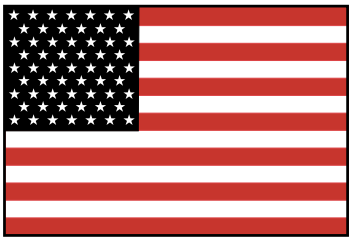
Regulatory Support Division

ADVISORY CIRCULAR
43–16A

AVIATION MAINTENANCE ALERTS



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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provide a common communication channel through which the aviation community can economically interchange service experience and thereby cooperate in the improvement of aeronautical product durability, reliability, and safety. This publication is prepared from information submitted by those who operate and maintain civil aeronautical products. The contents include items that have been reported as significant, but which have not been evaluated fully by the time the material went to press. As additional facts such as cause and corrective action are identified, the data will be published in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported via Malfunction or Defect Reports. Your comments and suggestions for improvement are always welcome. Send to: FAA; ATTN: Aviation Data Systems Branch (AFS-620); P.O. Box 25082; Oklahoma City, OK 73125-5029.

AIRPLANES

BEECH

Beech; Model C-12C (200 King Air); Crack in Main Landing Drag Brace Support; ATA 3230

During a scheduled landing gear time change, the technician cleaned and inspected the drag brace supports (P/N 50-120201-5).

The technician stated the right drag brace support appeared to be cracked. He conducted a dye-penetrant inspection, which confirmed it was cracked.

The submitter stated that an alert was issued to test the remaining aircraft in their fleet. The inspections revealed four additional cracked supports. These crack were found in the radius of the support between the two lugs.

The submitter recommends paying close attention to the drag brace supports during maintenance and or inspections. This is very important in aircraft with high time and high landing cycles. The Beech 200 King Air uses the same support.

Part total time-12,588.

Beech; Model 300; Super King Air; Failure of the Nosewheel Steering Barrel; ATA 3250

The pilot reported that he had to land the aircraft with the nosewheel canted approximately 45 degrees to the right.

A technician discovered the spring retainer, which is located in the end of the nose steering barrel assembly (P/N 50-820042-601), was missing. An investigation revealed cracks leading from one of the slots in the barrel where the retainer attaches.

Part total time-6,844 hours.

CESSNA

Cessna; Model 172G; Skyhawk; Crack Elevator Bellcrank Bracket; ATA 2730

An investigation revealed the elevator bellcrank bracket (P/N 0513063-3), which is held in place by only two rivets, was badly broken. The submitter believes total loss of elevator control would have been forthcoming had the bracket not been replaced.

The bracket location is at the left forward attachment angle under the cabin floor aft on the fuel selector. The submitter stated this defect was difficult to detect because the control function was normal. Also, this area is difficult to inspect due to the location. He suggested putting in the control lock and checking the elevator for movement of more than 2 inches.

A search of the FAA Service Difficulty Reporting Program data base revealed 11 reports of cracked elevator control brackets on the Cessna 172 series aircraft. The data base also revealed the replacement part is much stronger than the original part.

Part total time-3,500 hours.

Cessna; Model 340A; Failure of the Trailing Edge Flap-Limit Switch; ATA 2750

The pilot landed the aircraft and retracted the flaps during taxiing. The up-limit switch (P/N BZ-7RWT80) failed to stop the flaps at their up limit. Both chains attached to the flap cables were broken or damaged. Several operating rods were damaged and a pulley was pulled out of its mount.

According to the submitter, the probable cause of the problem was that the cam and the up-limit switch were slightly out of rig and allowed the flap gearbox to overrun. He stated that paying closer attention to the functioning and rigging of the flap system might prevent a costly repair.

Part total time-2,781 hours.

Cessna; Model 525; Citation Jet; Speed Brake Electrical Wiring Chafing Against Fuel Line; ATA 2760

The pilot reported the speed brake circuit breaker pops every time the speed brakes are extended manually or in automode.

The technician discovered a chaffed wire between pin five and pin X at connectors JR004 and PS003. The wire arced against the right engine motive fuel-flow line (P/N 6316000-52), which is located behind access panel 192CR. This caused a pinhole, and subsequently, a fuel leak, which elevated the danger. He repaired the wire and secured it away from any other adjacent structure or tubing. He also replaced the engine motive fuel-flow line.

Part total time-2,172 hours.

ERCOUPE

Ercoupe; Model 415-C; Incorrect Installation of Wing Tank Fuel Cap; ATA 2810

The following information was supplied as a joint effort of the Aircraft Certification Office (ACO) and Flight Standards District Office (FSDO) of Wichita, Kansas, Paul Pendleton, Aerospace Engineer, and Verle Engel, Aviation Safety Inspector, respectively. *(This article is published as it was received.)*

Recently an Ercoupe Model 415-C airplane experienced an accident as the result of fuel exhaustion of the main fuel tank. The pilot had recently purchased the airplane involved in the accident and was unfamiliar with the aircraft fuel system.

Investigation of the aircraft fuel system revealed that at least one of the fuel caps on the wing tanks was installed backwards. On Ercoupe aircraft the position of the cap is critical to fuel venting and can have a negative affect on fuel distribution. The pilot owner's manual contains a caution statement about this problem. Early serial number aircraft fuel caps could be installed backwards very easily. Later serial model aircraft fuel caps have a larger tab on one side to prevent inadvertent reversal of the cap. However, it has also come to our attention that some of the fuel cap tabs have become worn from years of service and can also be installed backwards. The accident aircraft still had at least five gallons of fuel remaining in the wing tanks that did not get transferred to the main center header tank for distribution to the engine.

Pilots flying these aircraft need to be reminded to perform a thorough preflight inspection, to pay special attention to the direction of fuel cap installation, and to become totally familiar with the aircraft fuel system. Also, mechanics need to be reminded to replace any worn fuel caps and seals while performing inspections and maintenance.

MOONEY

Mooney; Model M20J; Main Landing Gear Actuator Worm/Drive Gears Failure; ATA 3233

After a takeoff, the landing gear unlocked but failed to retract. The pilot's attempts to extend the gears to the down-and-locked position electrically and manually were unsuccessful. Upon landing, the gear collapsed.

The technician discovered that the recently replaced worm and drive gears inside the landing gear actuator were worn and stripped. The test results revealed the gears were soft and below the manufacturer's specifications.

The submitter suspects the gears were either improperly heat treated or never heat treated.

Part total time-206 hours.

PIPER

Piper; Model PA-28R-201; Arrow III; Separated Nose Gear Actuator Attach Bracket; ATA 5340

During a training flight, the pilot retracted the landing gear, heard a load bang, and the landing gear unsafe light came on. He extended the gear and made an emergency landing.

The technician discovered the nose gear actuator rear attach bracket (P/N 67271-88) was separated at the jack-point weld.

The submitter believes the nose gear actuator has too much travel in the retract position, which has caused damage to the nose landing gear hardware. The submitter also stated that this is a recurrent problem on his fleet of six like airplanes.

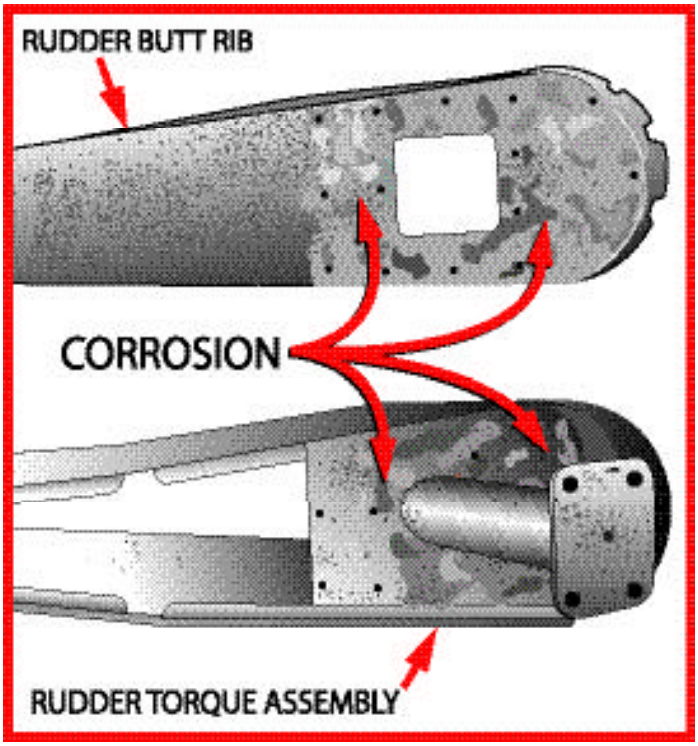
Part total time-865 hours.

Piper; Model PA-31-325; Corroded Rudder and Rudder Torque Tube; ATA 2720

While complying with Service Bulletin 1105 (rudder torque tube inspection), severe rust and corrosion were found on the rudder butt main rib, rudder torque tube, and welded rib assemblies (P/N 40040-09). (Refer to the illustration.)

A search of the FAA Service Difficulty Reporting Program data base revealed seven additional reports citing corrosion of the rudder torque tube.

Part total time-2,687 hours.



HELICOPTERS

HUGHES/MCDONNELL-DOUGLAS/BOEING/MD HELICOPTERS, INC.

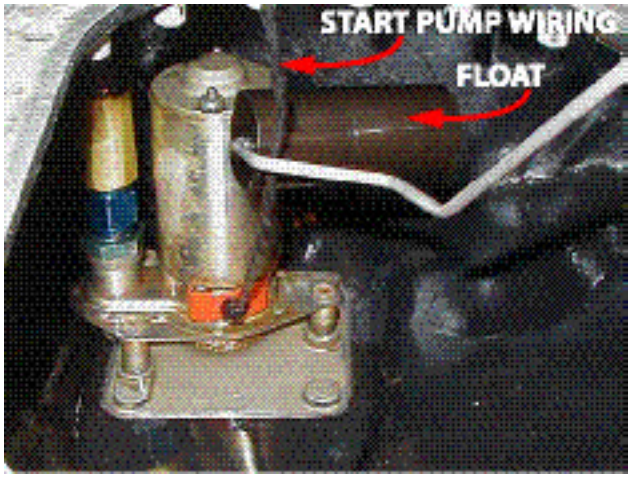
Hughes/McDonnell-Douglas/Boeing/MD Helicopters, Inc.; Series 369; Helicopters with submerged start (boost) pumps; Fuel quantity sending unit (float) entanglement with start pump wiring; ATA 2841

A senior Aviation Safety Inspector in the FAA's NW Region submitted the following Safety Alert. *(The article is published as it was received.)*

The fuel sending unit had been replaced in the helicopter's fuel tank and about one hour later the engine flamed out during a logging run due to fuel exhaustion. The pilot reported 110-120 pounds of fuel according to the fuel gauge and the "Low Fuel" Caution light never illuminated.

Examination determined that the fuel sending unit (float arm) had become entangled in the electrical power line that feeds the nearby start pump thus preventing the float from descending below the 120 pound level of fuel quantity (the Low Fuel sensor switch had been set at 60 pounds).

A mandatory service bulletin had been issued (15 September 1987) which discussed the procedure for ensuring that the start pump electrical wiring was properly secured to prevent entanglement with the fuel sending unit. The information in the SB was later incorporated in the maintenance manual but referenced only with respect to removal/ replacement of the start pump itself. No such guidance was available in the maintenance manual for cases whereby the fuel sending unit (float arm) alone was removed/replaced as in the above-described case.



A previous case of fuel exhaustion under the same circumstances occurred on July 14, 2002, in South Korea.

Examination for the security of the start pump wiring (i.e., either ty-wrapped or wound around the start pump fuel line) during any repair/replacement/removal of the fuel sending unit would likely prevent reoccurrence.

Part (fuel sending unit) time–1 hour.

AIR NOTES

HAPPY HOLIDAYS

REFLECTIONS AND PROJECTIONS

As we approach the end of another productive year, let us reflect on the events of the past and look, with enthusiastic optimism, to the future. May the experiences of the past year guide us to decisions that will increase aviation safety in the years to come.

Over the past year, it has been our privilege to provide the aviation community with this media for disseminating your aviation experiences. The intent is to create a safer aviation environment through the interchange of information. With your input and help, this publication has existed since August 1978. Since that time, there have been many changes in aviation. Many of the innovations and advancements have taken place because one person had an idea or wondered how something could be done better.

As we ponder and project the future of aviation, we have visions of great changes to come, which now are only a glimmer in someone's mind. We anticipate what each new day will present. Challenges and problems are met with solutions and changes.

As the Holiday seasons approach, we wish all of you a safe and joyous time with family and friends.

HAPPY HOLIDAYS

ELECTRONIC VERSION OF MALFUNCTION OR DEFECT REPORT

One of the recent improvements to the Flight Standards Service Aviation Information Internet web site is the inclusion of FAA Form 8010-4, Malfunction or Defect Report. This web site is still under construction and further changes will be made; however, the site is now active, usable, and contains a great deal of information.

Various electronic versions of this form have been used in the past; however, this new electronic version is more user friendly and replaces all other versions. You can complete the form online and submit the information electronically. The form is used for all aircraft except certificated air carriers who are provided a different electronic form. The Internet address is:

http://av-info.faa.gov/isdr/

When the page opens, select "M or D Submission Form" and, when complete, use the "Add Service Difficulty Report" button at the top left to send the form. Many of you have inquired about this service. It is now available, and we encourage everyone to use this format when submitting aviation, service-related information.

SERVICE DIFFICULTY REPORTING PROGRAM

The objective of the Service Difficulty Reporting (SDR) Program is to achieve prompt and appropriate correction of conditions adversely affecting continued airworthiness of aeronautical products fleet wide. The SDR program is an exchange of information and a method of communication between the FAA and the aviation community concerning inservice problems.

A report should be filed whenever a system, component, or part of an aircraft, powerplant, propeller, or appliance fails to function in a normal or usual manner. In addition, if a system, component, or part of an aircraft, powerplant, propeller, or appliance has a flaw or imperfection which impairs, or which may impair its future function, it is considered defective and should be reported under the program.

These reports are known by a variety of names: Service Difficulty Reports (SDR), Malfunction or Defect Reports (M or D) and Maintenance Difficulty Reports (MDR).

The collection, collation, analysis of data, and the rapid dissemination of mechanical discrepancies, alerts, and trend information to the appropriate segments of the FAA and the aviation community provides an effective and economical method of ensuring future aviation safety.

The FAA analyzes SDR data for safety implications and reviews the data to identify possible trends that may not be apparent regionally or to individual operators. As a result of this review, the FAA may disseminate safety information to a particular section of the aviation community. The FAA also may adopt new regulations or issue airworthiness directives (AD's) to address a specific problem.

The primary source of SDR's are certificate holders operating under Parts 121, 125, 135, 145 of the Federal Aviation Regulations, and the general aviation community which voluntarily submit records. FAA Aviation Safety Inspectors may also report service difficulty information when they conduct routine aircraft and maintenance surveillance as well as accident and incident investigations.

The SDR data base contains records dating back to 1974. Reports may be submitted on the Internet through an active data entry form or on hard copy. The electronic data entry form is in the Flight Standards Aviation web site. The URL is: <http://av-info.faa.gov>.

A public search/query tool is also available on this same web site. This tool has provisions for printing reports or downloading data.

At the current time we are receiving approximately 45,000 records per year.

Point of contact is:
John Jackson
Service Difficulty Reporting System Program Manager
Aviation Data Systems Branch, AFS-620
P.O. Box 25082
Oklahoma City, OK 73125

Telephone: (405) 954-6486
E-Mail address: 9-AMC-SDR-ProgMgr@faa.gov

IF YOU WANT TO CONTACT US

We welcome your comments, suggestions, and questions. You may use any of the following means of communication to submit reports concerning aviation-related occurrences.

Editor: Isaac Williams (405) 954-6488
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Mailing address: FAA, ATTN: AFS-620 ALERTS, P.O. Box 25082,
Oklahoma City, OK 73125-5029

You can access current and back issues of this publication from the internet at:
<http://av-info.faa.gov>. Select the General Aviation Airworthiness Alerts heading.

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between October 22, 2003, and November 19, 2003, which have been entered into the FAA Service Difficulty Reporting (SDR) System data base. This is not an all inclusive listing of Service Difficulty Reports. For more information, contact the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The mailing address is:

FAA
Aviation Data Systems Branch, AFS-620
PO Box 25082
Oklahoma City, OK 73125

These reports contain raw data that has not been edited. If you require further detail please contact AFS-620 at the address above.

FEDERAL AVIATION ADMINISTRATION
Service Difficulty Report Data

Sorted by Aircraft Make and Model then Engine Make and Model. This Report Derives from Unverified Information Submitted By the Aviation Community without FAA review for Accuracy.

ACFT MAKE	ENG MAKE	COMP MAKE	PART NAME	PART CONDITION	DIFF-DATE	T TIME
ACFT MODEL	ENG MODEL	COMP MODEL	PART NUMBER	PART LOCATION	OPER CTRL NO.	TSO
REMARKS						
AMRGEN	LYC		DRIVE GEAR	INOPERATIVE	09/29/2003	14
AG5B	O360A4K			STARTER		
WHILE ATTEMPTING TO START THE ENGINE, THE STARTER WOULD SPIN BUT WOULD NOT TURN THE ENGINE. THE ENGINE COWL WAS REMOVED AND IT WAS DETERMINED THAT THE STARTER DRIVE GEAR WOULD ENGAGE THE STARTER RING GEAR BUT WOULD NOT TURN. THE STARTER SSHAFT WOULD ROTATE INSIDE THE STARTER DRIVE GEAR. THE STARTER WAS REMOVED AND RETURNED FOR REPAIR.(K)						
AVIAT			TERMINAL	BROKEN	10/01/2003	574
A1B			81611	HORIZONTAL STAB		
LEFT FORWARD HORIZONTAL STABILIZER STRUT UPPER TERMINAL BROKE. BREAK OCCURED ON THE UPPER THREADED PORTION OF THE FITTING.						
AVIAT		LYC	DUCT	CHAFED	11/04/2003	
A1B			O360*	HEATER		
GROOVES WORN IN ROCKER BOX OIL RETURN TUBE. AUXILLIARY HEAT AIR DUCT AT LOWER SIDE OF NR 1 CYL WAS RUBBING ON OIL RETURN TUBE. GROOVES APPEARED TO BE 30 PERCENT TO 50 PERCENT THROUGH TUBE. AIRPLANE WAS 2.2 HOURS TIME IN SERVICE AFTER ANNNUAL / 100 HOUR INSPECTION. HEAT DUCT HAS TO BE CRUSHED TO FIT THIS INSTALLATION. THERE IS INADEQUATE ISOLATION BETWEEN DUCT AND ENGINE CYLINDER LUBRICATING OIL RETURN						

BBAVIA		CONT	SPAR	CRACKED	11/01/2003	6517
7AC			A65*	LT WING		

ANNUAL INSPECTION. PERFORMED AD2001-25-02R1. NOTED CRACK ON LEFT/AFT WING SPAR. CRACK IS ON WOOD SPAR OUTBOARD OF LIFT STRUT ATTACH POINT. AIRCRAFT TT 6517.08. SPAR ORIGIN UNKNOWN. NOTED PREVIOUS SPAR REPAIR IN DIFFERENT LOCATION DATEED 1979. RECOMMEND ALL APPLICABLE AIRCRAFT SPARS BE INSPECTED AS ALREADY REQUIRED BY AD.

BBAVIA		LYC	SEAT FRAME	BROKEN	08/23/2003	2808
7KCAB		IO320*	7145416	CABIN		

2 SEAT BACK SUPPORT STRAPS BROKE ON HARD LANDING (G-METER REUD 9G) UPPER STRAP WAS A NEW BREAK AT WELD CENTER STRAP BROKE AT REPAIR WELD FROM PREVIOUS BREAK. CFI IN REAR SEAT SUSTAINED MINOR BACK INJURY, AIRCRAFT LT MAIN GEAR COLLAPSED RESSULTING IN PROP STRIKE. 3-G NEGATIVE READ ON G METER IS BELIEVED TO OCCURRED WHEN AIRCRAFT SLID ON NOSE FOR 100+ FT ON ASPHALT RUNWAY. ALUMINUM SHEET FOR BACK SUPPORT MIGHT ALLOW BETTER LOAD DISTRIBUTION IN LIEU OF STEEL STRAPS.

BEECH	PWA	BEECH	COUNTERWEIG	LOOSE	10/21/2003	14478
100BEECH	PT6A28	1156100102	10061004217	LT ELEVATOR		

(CAN) ON PRE-FLIGHT INSPECTION, THE LT ELEVATOR WAS MOVED AND A RATTLING NOISE WAS HEARD.FURTHER INSPECTION REVEALED THE INBOARD BALANCE WEIGHT, OUTBOARD BALANCE WEIGHT SUPPORT WAS LOOSE. THE THREE ATTACHING BOLTS PN AN174-6 WERE FOUND BACKKEDOUT APPROX. 1/8 '.THE ELEVATOR SKIN HAD TO BE DE-RIVETED TO ACCESS THESE BOLT S.

BEECH		PWA	HINGE	LOOSE	09/25/2003	14388
100BEECH		PT6A28	11564000035	RUDDER		

(CAN) DURING VERTICLE STAB. DE-ICE BOOT REPLACEMENT, IT WAS NOTED THAT THREE OF THE SIX JO-BOLT FASTENERS THAT ATTACH THE UPPER RUDDER HINGE BRACKET TO THE SPAR WERE LOOSE.THESE FASTENERS WERE REPLACED WITHNEW.

BEECH	PWA	PINION GEAR	CRACKED	10/28/2003	
100BEECH	PT6A28	1158100283	MLG		

(CAN) DURING GEAR SWING LT HAND MAIN LANDING GEAR WAS SHUTTERING ON RETRACTION. REMOVED ACTUATOR AND REPLACED WITH OVERHAULED PART.TOOK ACTUATOR TO OVER HAUL FACILITY AND DISASSEMBLED AND DISCOVERED DEFECT.

BEECH	PWA	SHAFT	SHEARED	10/11/2003	
1900C	PT6A65B	335240253	ELEVATOR DRIVE		

(CAN) ELECTRIC TRIM (ELEVATOR) DRIVE SHAFT SHEARED. THIS CAUSED ONE CAPSTAND TO OPERATE AND THE OTHER TO MOVE FREELY ON ITS OWN. THIS MOVEMENT CAUSED THE BRIDAL CABLES TO UNWIND AND CREATE RESTRICTION. THE TRIM WAS RESTRICTED FROM GOING NOSSE DOWN. MANUAL MOVEMENT OF THE TRIM WAS ALSO RESTRICTED.

BEECH	PWA	LINE	CRACKED	10/05/2003	
1900C	PT6A65B	3032125	ENGINE		

(CAN) ON APPROACH INTO SEATTLE THE RT ENGINE POWER DECREASED SLOWLY ON ITS OWN. THE CREW SHUTDOWN AND SECURED THE ENGINE. THE AIRCRAFT LANDED UNEVENTFULLY AND WAS TOWED FROM THE RAMP. DURING INVESTIGATION BY MAINTENANCE IT WAS FOUND THAT TTHE ENGINE WOULD ACTUALLY IDLE BUT AT MIN FLOW. THE PY AND P3 LINES WHERE REMOVED AND BY PRESSURE TESTING REVEALED A CRACK JUST FORWARD OF THE AFT B NUT. CRACK WAS RUNNING HALFWAY AROUND THE CIRCUMFERENCE OF THE TUBE.

BEECH	PWA	RAYTHN	SPAR CAP	CRACKED	10/02/2003	16961
1900D	PT6A67D	1181200291		RT WING	16961	

(CAN) A CRACK WAS FOUND IN THE RT LOWER SPAR CAP HORIZONTAL FLANGE AT STATION 117.0BL.THE CRACK EXTENDED FROM THE RIVET HOLE AFT TO THE EDGE OF THE FLANGE, AND FORWARD JUST SHY OF THE FLANGE RADIUS (OF THE VERTICAL LEG).THE CRACK WAS NOTICEED ON A PREFLIGHT INSPECTION BY MAINTENANCE PERSONNEL. THE MANUFACTURER WAS CONTACTED AND AN APPROVED REPAIR INITIATED TO SPLICE IN A NEW PIECE OF THE LOWER

BEECH		FILTER	SEPARATED	10/14/2003
19A		BA3	AIR INTAKE	

ENGINE LOST POWER SHORTLY AFTER TAKEOFF. FORCED LANDING RESULTED IN SUBSTANTIAL DAMAGE TO THE AIRCRAFT. INVESTIGATION FOUND PIECES OF THE AIR FILTER ELEMENT IN THE VENTURI OF THE CARBURETOR. THE FILTER ELEMENT HAD BEEN IMPROPERLY INSTALLED ALLOWING THE ENTIRE AFT END OF THE OVAL ELEMENT TO BE PINCHED BETWEEN THE FILTER SCREEN AND THE FILTER HOUSING. THIS ALLOWED ELEMENT PIECES TO BE SEPARATED AND INGESTED INTO THE CARBURETOR.

BEECH	CONT	ROD END	BROKEN	10/16/2003
58	IO520C	ADNE5323	MLG	

(CAN) ON GEAR RETRACTION ON OUR BEECH 58, A BANG WAS HEARD AND FLIGHT CREW NOTICED THE NOSE GEAR PARTIALLY RETRACTED. AIRCRAFT LANDED AND NOSE GEAR COLLAPSED. DAM AGE TO AIRCRAFT WAS THE FOLLOWING: LT AND RT PROPELLERS BENT, NOSE GEAR DOORRS DAMAGED, HEATER EXHAUST STACK DAMAGED, PITOT TUBE DAMAGED. AFTER JACKING AIRCRAFT WE FOUND THE FORWARD ROD END ON THE RETRACT ARM TO HAVE BROKEN AROUND THE BEARING HOUSING ROD END PART NUMBER ADNE5-323. AIRCRAFT TOTAL TIME:7064.0 BEARING DOES NOT APPEAR TO HAVE SEIZED AS IT IS STILL FREE ON THE ATTACHING BOLT.

BEECH	CONT	CROSSOVER	CHAFED	08/22/2003	1186
58P	TSIO520WB	654892	RIGHT		

DURING A PHASE INSPECTION, THE LEFT CROSSOVER TUBE WAS POUND CHAFED BY THE ENGINE MOUNT TRUSS (PN 102-910026-131). THE CHAFING WAS APPROXIMATELY HALFWAY THROUGH THE WALL THICKNESS. WE HAVE A SPECIAL INSPECTION TO CHECK THE HEATSHIELD FOR CHATING IN THIS SAME AREA, OTHERWISE THIS WOULD HAVE PROBABLY BEEN MISSED DUE TO ITS INACCESSIBILITY BEHIND THE INDUCTION FILTER HOUSING, THE PART WILL BE REPLACED TO SEE IF A DIFFERENT TUBE HAS THE SAME PROBLEM. OTHER AIRCRAFT IN THE FLEET WERE CHECKED WITHOUT DEFECTS NOTED.(K)

BEECH	PWA	DRIVE SYSTEM	DAMAGED	09/18/2003
65A90	PT6*	TE FLAP		

UPON APPROACH TO SUA A SPLIT FLAP CONDITION WAS REPORTED. THE AIRCRAFT LANDED WITHOUT INCIDENT. SUBSEQUENT INVESTIGATION REVEALED A SEPARATION OF THE SWAGED END FITTING TO THE FLAP ACTUATOR CAUSING A BIND IN THE LEFT FLAP SYSTEM. P/N 123225Y116 FLAP DRIVE CABLE ASSEMBLY WAS REPLACED WITH NEW AND AN OVERHAULED FLAP ACTUATOR P/N 50-521198-3 WAS REPLACED AS A PRECAUTION.

BEECH	PWA	SWITCH	SEPARATED	10/07/2003	16822
A100	PT6A28	1199111992	EXTINGUISHER		

(CAN) RECENTLY BEECH HAS ADDED THE FIRE EXTINGUISHER ACTIVATION CHECK TO THE PHASE 2 INSPECTION, UPON COMPLETION THIS INSPECTION WE FOUND THAT BOTH SYSTEM LT AND RT FAILED THE TEST. WITH FURTHER INVESTIGATION WE FOUND THE BACK PART OF THE SSWITCHES HAD FALLEN OFF. THIS SWITCH IS A 2 PART SWITCH. THE PART YOU SEE IN THE COCKPIT IS A LIGHT TO INDICATE AN ENGINE FIRE WITCH YOU PUSH TO EXTINGUISH A FIRE. THIS PART OF THE SWITCH SENDS A SIGNAL TO THE SQUIB. WHEN PUSHED THE INDICATING PART OF THE SWITCH PUSHES ON THE ACTIVATION PART OF THE SWITCH WITCH WILL FIRE THE SQUIB. THEACTIVATION PART OF THE SWITCH IS ATTACHED TO THE BACK OF THE INDICATION PART WITH CLASPS. THE CLASPS HAD FAILED ALLOWING THE ACTIVATION PART

BEECH PWA CHECK VALVE FAILED 10/17/2003
A100 PT6A28 FUEL SYS
(CAN) AFTER PILOTS HAD DEPLANED PASSENGERS AND BAGGAGE AT A SCHEDULED STOP THEY NOTICED FUEL COMING OUT OF THE FUEL VENT. MAINTENANCE TOWED THE A/C TO THE HANGER AND DEFUELED THE A/C. THEY FOUND THAT THE ONEWAY VALVE GOING TO THE AUX TANKK, SOMETHING HOLDING THE FLAPPER OFF THE SEAT LETING FUEL GO TO THE AUX TANK OVER FILLINGIT MAKING IT DRAIN ON THE GROUND. VALVE CLEANED AND CHECKED AND INSTALLED LINES WERE CHECKED FOR CONTAMINATION AND NONE FOUND. A/C WAS RETURNED TO SERVICE.

BEECH CONT ROLL PIN BROKEN 09/25/2003 85
C35BEECH E2258 B65801000 OIL COLLAR
ROLL PIN BROKE ALLOWING SLIP RING TO MOVE OUT OF POSITION CAUSING A HYDRAULIC LOCK IN PROPELLER OPERATION. PROPELLER REMAINED IN LOW PITCH, HIGH RPM. REASON FOR PIN FAILURE UNKNOWN.

BELL ALLSN BELL YOKE DAMAGED 09/17/2003
206B 250C20 206010101129 MAIN ROTOR HEAD 1059
(AUS) MAIN ROTOR BLADE GRIP BEARINGS CAUSED BRINELLING ON YOKE ARMS.

BELL ALLSN HOUSING WORN 08/27/2003 4301
206B 250C20 4000395 ROTOR BRAKE
DURING A 100 HOUR INSPECTION IT WAS FOUND THAT THE ROTOR BRAKE RETURN SPRING HAD WORN INTO THE HOUSING. THE SPRINGS ON ALL FOUR HOUSINGS WERE COCKED AT AN ANGLE FROM TRUE CENTER, ALLOWING THE SPRING TO WEAR A GROOVE INTO THE SIDE OF THE HOOUSING. THIS GROOVE HINDERED THE SPRING ACTION TO MOVE THE PUCK EITHER IN OR OUT. THE CONCERN IS THAT THE SPRING COULD BUST, OR BIND UP NOT ALLOWING THE PUCK TO MOVE BACK OFF OF THE ROTOR DISK. THE RECOMMENDATION WOULD BE TO LENGTHEN THE RETURN PISTON GUIDE BORE WHERE THE PISTON RETURN PIN MOVES THRU THE HOUSING. THIS WOULD HELP KEEP EVERYTHING IN ALIGNMENT SO THE RETURN SPRING WILL ALWAYS MOVE STRAIGHT.

BELL ALLSN TURBINE FAILED 09/11/2003
206L 250C20R 23038160 N1
(CAN) AFTER ENGINE WAS SHUTDOWN A RUBBING NOISE WAS HARD COMING FROM THE N1 TURBINE WHEELS. IT WAS CONFIRMED BY MOTORING THE ENGINE AFTER SHUTDOWN. TURBINE WAS REPLACED AND SENT TO AN APPROVED REPAIR FACILITY.

BELL ALLSN FITTING CRACKED 08/07/2003
206L3 250C30 206032409001 TAILBOOM
DURING A ROUTINE INSPECTION THE UPPER LEFT HAND TAIL BOOM ATTACH FITTING WAS FOUND TO HAVE A CRACK EMANATING FROM THE FASTENER HOLES WHICH ATTACH THE FITTING TO THE ADJACENT STRUCTURE.

BELL ALLSN BOLT BURNED 10/23/2003
206L3 250C30 360036 BATTERY MOUNT
DURING A SCHEDULED INSPECTIOM FOUND PRIMARY ELECTRICAL CABLE, P6D000, IN BATTERY COMPARTMENT TO HAVE A BURNED AREA ADJACENT TO RT BATTERY HOLD DOWN BOLT. MFG, STC SH297NM HAS BEEN INSTALLED ON THIS AIRCRAFT. THE BURNED AREA WAS CAUSED BY HEEAVY CONTACT OF THE PRIMARY ELECTRICAL CABLE WITH THE BATTERY HOLD DOWN BOLT. THERE IS NOT ENOUGH ROOM IN THE BATTERY COMPARTMENT TO REROUTE THIS CABLE. DAMAGE TO SOME EXTENT ON THIS CABLE IS PREVALENT ON SEVERAL AIRCRAFT ON WHICH THIS STC HAS BEEN INSTALLED ON. THE DESIGN OF THE BATTERY MOUNTING BRACKET IS THE CAUSE OF DAMAGE TO THE AIRCRAFT WIRING. THIS CONDITION, IF LEFT UNRESOLVED, COULD RESULT IN SMOKE IN THE CABIN, ELECTRICAL SYSTEM FAILURE, FIRE, OR

BOEING PWA CRANKSHAFT FRACTURED 09/05/2003 10026
A75 R985AN14B 40350 ENGINE
THE CRANKSHAFT APPEARS TO HAVE FRACTURED AT THE CRANK PIN. SEPARATING THE CRANK PIN AND ROD ASSEMBLY FROM THE PROPELLER SHAFT. THE AIRCRAFT WAS IN THE PROCESS OF BEING FERRIED CROSS COUNTRY. THE AIRCRAFT IS USED FOR AEROBATIC PERFORMANCEES. (SW15200318971)

BOMBDR PWC PROXIMITY FAILED 07/20/2003
DHC8400 PW150A NLG
(CAN) LANDING GEAR FAILURE, AFTER TAKE-OFF GEAR UP SELECTED. NOSE DOOR ADVISORY LIGHT CAME ON FOR ABOUT 30 SEC AND OFF. ON AGAIN FOR 1 MIN AND SO ON. RETURNED BACK TO BASE. LIGHT OFF BEFORE LANDING. INVESTIGATION/ACTION NOSE LANDING GEARR DOOR CLOSED PROXIMITY SENSOR REPLACED IAW AMM 32-61-06.

BOMBDR PWC PUMP LEAKING 10/10/2003
DHC8402 PW150A 6617302 HYD SYS
(CAN) DURING DESCENT FLIGHT CREW REPORT LT HYRAULIC SYSTEM PRESSURE GOING DOWN AND CONFIRM HYD. LEAK COMMING FROM LT NACELLE. FLAP EXTENSION CUTOUT BUT VERY SLOW. A/C LANDED OK. LT ENGINE DRIVE HYDRAULIC PUMP FOUND LEAKING AT PUMP INTERFACCE (SPLIT LINE). NEW PUMP INSTALLED, HYD SYSTEM FLUSHED AND RESERVOIR SERVICED, CASE DRAIN, PRESSURE AND RETURN FILTER INSPECTED AND REPLACED . A/C RETURN TO

BRAERO VALVE LEAKING 10/28/2003 4643
BAE125800A AC69784 NLG BRAKE
CREW NOTICED THAT WHEN THEY ENGAGED THE PARKING BRAKE, A VERY LOUD SQUEALING NOISE COMING FROM THE NOSE AREA, WHICH IS THE LOCATION OF THE EMERGENCY PRESSURE REDUCING VALVE. CHANGED VALVE, PROBLEM SOLVED. SUSPECT INTERNAL LEAKAGE OF VALVE.

BRAERO GARRTT RELAY ARCED 10/15/2003 5233
BAE125800A TFE731* 2T2D126 COCKPIT
PILOT REPORTED SMOKE IN COCKPIT JUST PRIOR TO LANDING. AIRCRAFT LANDED WITHOUT HAVING TO DECLARE AN EMERGENCY. MAINTENANCE FOUND RELAY K30 IN THE TAS PROBE HEAT CIRCUIT HAD OVERHEATED DUE TO A FAILED CONNECTION ON THE POWER FEED TO THE PRROBE HEATER. RELAY K30 AND K25 AND K11 WERE REPLACED. K25 AND K11 WERE REPLACED FOR PERCAUTIONARY REASONS DUE TO THE HEAT DAMGE FROM RELAY K30.

BRAERO GARRTT PROBE INTERMITTENT 10/30/2003 9187
BAE125800A TFE731* 0204KTU/4 FUEL QTY
AFTER TAKE-OFF, PILOT NOTICED A INTERMITTENT DROP ON THE LEFT FUEL QUANTITY GAUGE OF ABOUT 500 LBS, THEN EVERYTHING WAS NORMAL. ON NEXT LEG, AFTER TAKE-OFF, PILOT NOTICED THE SAME THING. INVESTIGATION UNCOVERED AN INTERMITTENT NR 4 FUEL PROOBE IN THE LEFT WING. THE INTERMITTENT OPERATION WAS DISCOVERED ONLY AFTER EXPOSING THE PROBES, AND USING A BARFIELD BOX, AND THEN TAPPING ON EACH PROBE, UNTIL THE PROBLEM WAS FOUND.

CESSNA CONT BUSHING WORN 08/23/2003 10
150G O200A 24122 ROCKER ARMS 10
EIGHT ROCKER ARM BUSHINGS SHOWED INDICATIONS OF EXCESSIVE WEAR. THE PROBLEM WAS INDICATED AT THE FIRST OIL CHANGE (10 HOURS) AFTER ENGINE OVERHAUL AS BRONZE PARTICLES IN THE OIL FILTER. THE OVERHAULED ROCKER ARMS WERE INSTALLED IN NEW MFGG CYLINDERS P/N 653816 WHICH INCLUDED NEW ROCKER SHAFTS P/N 654375. THE ROCKER ARMS WERE REMOVED AND BUSHING CLEARANCE MEASURED. THE CLEARANCES VARIED FROM .005 TO .010. MANUFACTURER'S O/H MANUAL STATES NEW CLEARANCE AS .001 TO .0025 AND THE SERVICE LIMIT AS .004.

CESSNA CONT RIB CRACKED 10/01/2003
150K O200A 04320016 HORIZONTAL STAB
(CAN) WHEN REPLACING THE LT LEADING EDGE HORIZONTAL STABILIZER SKIN PN 0432001-16 DUE TO IT BEING DENTED. IT WAS FOUND THAT BOTH INBOARD NOSE RIB ASSEMBLIES WERE CRACKED. THEY WERE REPLACED WITH NEW FACTORY PART PN 0432001-6 RT AND PN 04320001-46 LT.
CESSNA LYC BRACKET CRACKED 10/22/2003 7240
152 O235* 04311481 LT REAR FIN
FOUND LT REAR VERTICAL FIN BRACKET CRACKED AT BASE (FITTING).
CESSNA LYC SPAR CRACKED 09/25/2003
152 O235L2C 042640032 RT WING
(CAN) RT WING AFT SPAR FOUND CRACKED AT AFT WING ATTACH POINT. 1 INCH CRACK LOCATED FROM INBOARD END OF AFT SPAR P/N 0426400-32 JUST BELOW SPAR REINFORCEMENT P/N 0 426400-12. CRACK EXTENDS ALONG THE LENGTH OF THE SPAR 1 INCH. WING REMOVEED FOR REPAIR.
CESSNA LYC CESSNA BAR CRACKED 10/06/2003
152 O235L2C 04115262 RUDDER PEDAL
(CAN) LOSS OF LT RUDDER CONTROL IN FLIGHT. LT RUDDER TORQUE TUBE BAR FOUND CRACKED AND DEFORMED WHERE THE 'TEE' IS WELDED TO THE BAR. LT RUDDER PEDAL ON THE RHS. (AIRCRAFT BEING FLOWN FROM RT SEAT) CRACK 2 INCHES LONG, FROM END OF PIPE, ARROUND HEAT AFFECTED ZONE OF THE WELD, CONTINUING FOR .7500 INCH ALONG PIPE (INBOARD). AIRCRAFT LANDED SAFELY AT DESTINATION AIRPORT (CYBW).
CESSNA CONT BRACKET BROKEN 10/06/2003 3500
172G O300D 05130633 ELEV BELLCRANK
BADLY BROKEN BRACKET WAS HELD IN PLACE BY ONLY TWO RIVETS. TOTAL LOSS OF ELEVATOR WOULD HAVE BEEN FORTHCOMING HAD BRACKET NOT BEEN REPLACED. THIS WAS DIFFICULT TO DETECT BECAUSE CONTROL FUNCTION WAS NORMAL AND IS DIFFICULT TO VIEW (BEING BELOW THE FLOOR). IN ORDER TO DETECT THE PROBLEM. ONE MUST PUT IN THE CONTROL LOCK AND CHECK ELEVATOR FOR MOVEMENT. (MORE THAN TWO INCHES INDICATES THE PROBLEM). REPLACEMENT PART (05130633) IS MUCH STRONGER THAN THE ORIGINAL PART.(K)
CESSNA LYC FLOAT OBSTRUCTED 09/30/2003 193
172N O320 30804 CARBURETOR
PILOT DEPARTED HOME AIRPORT FOR INSTRUCTURAL FLIGHT WITH STUDENT. ON TAKE OFF ROLL AT DESTINATION AIRPORT, ENGINE LOST POWER. INSTRUCTOR LANDED ON PARALLEL RUNWAY WITHOUT INCIDENT. INSTRUCTOR RESTARTED ENGINE AND PERFORMED RUN-UP SATISFAACTORY. A/C WAS INSPECTED WITHOUT ANY DEFECTS NOTED, AND NUMEROUS HIGH SPEED TAXI CHECKS AND TAKE OFF AND LANDINGS PERFORMED WITHOUT INCIDENT. INSTRUCTOR RETURNED AIRCRAFT TO HOME AIRPORT WHERE ON NINTH SEQUENTIAL FLIGHT, ENGINE LOST PARTIAL POWER. A/C WAS LANDED AGAIN WITHOUT INCIDENT. CARBURETOR WAS REMOVED AND DISASSEMBLED. APPARENT NEW STYLE PLASTIC FLOAT WAS FOUND TO BE RUBBING LOWER FUEL BOWL. THIS CAUSED THE FLOAT TO BIND AND
CESSNA LYC CONTROL UNIT SHORTED 10/10/2003
172N O320H2AD DGR3 ALTERNATOR
(CAN) ACU SHORTED INTERNALLY CAUSING ALTERNATOR TO RUN UNCONTROLLED WHILE IN FLIGHT. PROBLEM RESULTED IN SMOKE IN COCKPIT WITH ALL RADIOS AND INSTRUMENTS THAT ARE ELECTRICAL TO TAKE TO MUCH POWER AND DESTROYED THEM ALL INTERNALLY.
CESSNA LYC LINE FAILED 09/08/2003
172P O320* 0500118126 RT MLG BRAKE
DURING LANDING ROLLOUT, RT MAIN BRAKE LINE FAILED CAUSING LOSS OF BRAKE PRESSURE. INSPECTION DETERMINED THAT BRAKE LINE HAD BEEN CHAFING ON FAIRING ASSEMBLY AND SIDEWALL OF RIGID LINE HAD FAILED. SUGGEST MORE FREQUENT INSPECTIONS AND MOREE ATTENTION TO CLEARANCES BETWEEN FAIRING AND
CESSNA BULKHEAD CRACKED 10/03/2003 5460
172RG 24130016 FUSELAGE
CRACKS IN UPPER LEFT BULKHEAD UNDER PILOT'S INBOARD RUDDER PEDAL TORQE TUBE PILLOW BLOCK, ALLOWED ABNORMAL FORWARD/AFT MOVEMENT OF RUDDER PEDAL TORQE TUBE. REPORTED TO MFG BY TELECON.
CESSNA LYC BULKHEAD CRACKED 10/03/2003 5460
172RG O360* 24130013 FUSELAGE
CRACKS IN LOWER LEFT BULKHEAD UNDER PILOT'S INBOARD RUDDER PEDAL TORQUE TUBE PILLOW BLOCK, ALLOWED ABNORMAL FORWARD/AFT MOVEMENT OF RUDDER PEDAL TORQUE TUBE. REPORTED TO MFG BY TELECON.
CESSNA LYC SPAR BROKEN 05/16/2003
175 O360A1A HORIZONTAL STAB
(CAN) DISCOVERED A BREAK IN THE STABILIZER SPAR DURING AN ANNUAL INSPECTION.
CESSNA BEARING BROKEN 10/12/2003
177RG S24266 MLG ACTUATOR
(CAN) ON APPROACH FOR LANDING PILOT SELECTED GEAR DOWN ANDHEARD A LOUD BANG FROM BEHIND HIM RECIEVING NO GREEN DOWN LIGHT THE PILOT ABORTED HIS LANDING. HE CIRCLED THE AIRPORT AND TRIED NUMEROUS TIMES TO GET HIS GEAR DOWN. FINALLY HE SELECTTED GEAR DOWN AND DID A FLY BY OF THE TOWER. TOWER PERSONNEL SAW TOLD HIM THAT HIS NOSE GEAR WAS DOWN BUT HIS MAIN GEAR WAS JUST HANGING THERE. PILOT LANDED ON GRASSBESIDE RUNWAY AND LANDED SAFLY. THE NOSE GEAR WAS LOCKED DOWN BUT THE MAIN GEAR WAS NOT.THE FLOOR WAS LIFTED AND IT WAS DISCOVERED THAT THE MAIN GEAR ACTUATOR ROD EN D THAT IS ATTACHED TO THE GEAR HAD BROKEN AND THE BROKEN PIECE HAD FALLEN INTO THE GEAR BELLCRANK AND JAMMED STOPPING THE GEAR FROM LOCKING DOWN CORR
CESSNA BEARING BROKEN 10/12/2003
177RG S24266 MLG
(CAN) PILOT WAS COMING INTO LAND SELECTED GEAR DOWN. HEARD LOUD BANG FROM REAR OF AIRCRAFT AND GOT NO GREEN DOWN LIGHT INDICATION. ABORTED APPROACH AND TRIED SEVERAL TIMES TO GET GEAR DOWN BUT HAD NO SUCCESS. PUT GEAR HANDLE IN DOWN POSITIOON AND DID FLY-BY THE TOWER. TOWER REPORTED HE HAD NOSE GEAR DOWN BUT MAIN GEAR WAS PARTIALLY DOWN. PILOT ELECTED TO DO LANDING ON GRASS BESIDE RUNWAY. LANDED SUCESSFULLY VERY LITTLE DAMAGE DONE TO AIRCRAFT. NOSE GEAR WAS DOWN AND LOCKED. AIRCRAFT WAS LIFTED UP AND GEAR WAS LOCKED DOWN. AIRCRAFT WAS PUT ON JACKS AT HANGER. FLOOR WAS LIFTED AND IT WAS FOUND THAT THEROD END ATTACHING THE MAIN GEAR ACTUATOR TO THE MAIN GEAR LINKAGE HAD BROKEN, THE PART THAT HAD BROKEN OFF HAD GO
CESSNA CONTROL OUT OF POSITION 10/08/2003
182 RUDDER
A SAFETY RECOMMENDATION WAS SUBMITTED IN RESPONSE TO SEVERAL INSTANCES WHERE THE RUDDER CONTROL CABLE HAD BEEN FOUND LODGED UNDER THE MOUNTING BOLT FOR THE ELEVATOR CONTROL CABLE PULLEY AT APPROXIMATELY STATION 156. A REVIEW OF THE INSTALLAATION INDICATES THIS CONDITION COULD BE CAUSED BY INADVERTINTLY PUSHING THE CABLE DOWN ALLOWING IT TO BE TRAPPED WHEN MAINTENANCE IS BEING PERFORMED ON THE BATTERY OR AVIONICS PACKAGE WHICH ARE ALSO ACCESSED THROUGH THE STATION 156 ACCESS PANEL. FAILURE TO RECHECK THE RUDDER CONTROL RIGGING FOLLOWING WORK ON THE NOSE WHEEL STEERING OR RUDDER TRIM SYSTEMS, CAN ALSO CAUSE THE RUDDER SYSTEM TO EXHIBIT EXCESSIVE SLACK.

CESSNA CONT HUB WRONG PART 09/23/2003
182B O470R PROPELLER
(AUS) PROPELLER HUB FAULTY. DURING COMPLIANCE WITH AD/PMC/47 IT WAS FOUND THAT THE MOUNTING STUDS HAD BEEN INCORRECTLY SEALED. SILASTIC MATERIAL WAS USED FOR SEALING RATHER THAN THE CORRECT PROCEDURE AS INDICATED IN MFG SL 1993-17. THE HUBB WAS ALSO INCORRECTLY STAMPED AS STILL BEING A GREASE FILLED HUB. PROPELLER PISTON ALSO CONTAINED A NON-APPROVED REPAIR. UNAPPROVED PROCEDURE. PERSONNEL/MAINTENANCE ERROR.
CESSNA CONT BOLT SEPARATED 09/25/2003
310R IO520M AN557 NLG
(AUS) NOSE WHEEL AXLE BOLT NUT SEPARATED ALLOWING AXLE CAP TO FALL OFF THE NOSE WHEEL ASSEMBLY. DURING LANDING THE NOSE WHEEL CAME OUT OF THE FORK AND WEDGED UNDER THE NOSE WHEEL FAIRING. THE NOSE WHEEL TIRE HAD BEEN CHANGED APPROXIMATELYY 10 HOURS PREVIOUSLY.
CESSNA CONT ROD BOLT DAMAGED 09/10/2003
310R TSIO520BB SA629340 ENGINE
INSTALLED (1) NEW ROD BOLT, SA 629340 LOT NR 578901, ALONG WITH NEW NUT NR SA 628109. NUT WOULD NOT REACH SPEC. TORQUE. NUT WAS REMOVED TO REVEAL THREADS, DAMAGED.
CESSNA CONT TORQUE TUBE TORN 09/25/2003
402B TSIO520E 504501018 MLG
DURING A UNSCHEDULED INSPECTION, AFTER A PILOT REPORT OF THE RT LANDING GEAR NOT RETRACTING, THE MECHANIC FOUND THE RT MAIN GEAR TORQUE TUBE BROKEN OR TORN. IT IS SUSPECTED THAT FATIGUE COULD BE THE DRAG BRACE.
CESSNA GARRTT SPAR CAP CORRODED 10/31/2003 5503
441 TPE331* 58221661 ZONE 500
DURING A ROUTINE INSPECTION SOME PAINT BLISTERING WAS NOTICED ALONG THE LT AFT SPAR UPPER CAP IN THE THE EXPOSED AREA OF THE LT WHEEL WELL. FURTHER INVESTIGATION REVEALED THAT THE SPAR CAP HAD SEVERE EXFOLIATION TYPE CORROSION AND WAS CAUSIING THE SPAR CAP TO FLAKE APART. ONCE THE AFT SECTION OF SKIN WAS REMOVED, IT WAS NOTICED THAT THE CORROSION HAD EXTENDED ALL THE WAY THOUGHT THE CAP. INSPECTION OF THE REMAINING SPAR CAPS REVEALED NO CORROSION.
CESSNA GARRTT CLAMP CRACKED 09/24/2003
441 TPE33110 24540100 BLEED SUPPLY
REPORTED SMOKE IN COCKPIT UPON TAKEOFF. A/C RETURNED IMMEDIATELY AND PERFORMED NORMAL LANDING. INSP REVEALED A CRACKED V-BRAND CLAMP CONNECTING BLEED AIR SUPPLY LINES IN RT WING ROOT AREA ADJACENT TO SURFACE DEICE PRESSURE REGULATORS. SMMOKE WAS DETERMINED TO ORIGINATE FROM A PLASTIC/VINYL HOSE INSIDE CABIN ADJACENT TO FUSELAGE SKIN WHICH HAD BURNED AND MELTED. SUSPECT HEAT FROM BLEED AIR SUPPLY LINES CAUSED LOCAL AREA TO CONDUCT HEAT THROUGH THE SKIN TO THE EXTENT NECESSARY TO MELT THE TUBING. INSP REVEALED NO OTHER APPARENT HEAT RELATED DAMAGE. SUBMITTER NOTES THAT THE CRACK IN THE V-BAND CLAMP OCCURRED AT JUNCTION OF BARREL BOLT, AND NO SAFETY DEVICES WERE
CESSNA GARRTT RIVET LOOSE 09/25/2003
441 TPE33112UA ELEVATOR
(AUS) LT HORIZONTAL STABILIZER ELEVATOR HINGE ATTACHMENT RIVETS (3OFF) LOOSE. RIVETS WERE CHERRY-MAX TYPE. FOUND DURING INSPECTION IAW AD/CESSNA400/012 AMDT3.
CESSNA SCREEN MISSING 11/03/2003 300
525A 206666500 HYD SYSTEM
WHILE PERFORMING INSPECTION FOUND THAT IN-LINE HYDRAULIC FILTER SCREENS WERE NOT INSTALLED. THIS IS THE SECOND OF THESE TYPE NEW AIRCRAFT WE HAVE FOUND MISSING THESE FILTERS SCREENS. ORDERED FILTER SCREENS AND INSTALLED. NOTIFIED MANUFACCTURER THAT THESE SCREENS ARE NOT BEING INSTALLED AT THE FACTORY ON SOME AIRCRAFT. RECOMMEND CONFIRMING THESE PART NUMBER HYDRAULIC SCREENS ARE INSTALLED ON NEW AIRCRAFT AT FIRST AVAILABLE INSPECTION.
CESSNA WIRE ARCED 09/25/2003
550 FUEL BOOST
IN TROUBLESHOOTING A SUBMERGED FUEL BOOST PUMP CIRCUIT BREAKER POPPING, MAINTENANCE TECHNICIANS DISCOVERED THE FUEL BOOST PUMP ELECTRICAL HARNESSES HAD CHAFED THROUGH THE BUNDLE INSULATION AND WAS ARCING ON ALUMINUM FUEL LINES P/N 6526355-337 INSIDE BOTH THE LEFT AND RIGHT WET WING. THE POTENTIAL FOR FUEL VAPOR IGNITION COULD HAVE CAUSED AN EXPLOSION.
CESSNA WIRE HARNESS CHAFED 09/26/2003 7553
550 ZONE 600 997
THE FUEL PUMP WIRING HARNESS IS NOT SUPPORTED WITHIN THE FUEL CELL AND CHAFED ON THE ALUMINUM FUEL LINE FROM THE PRIMARY PUMP TO THE CHECK VALVE INSIDE THE FUEL CELL. THERE WAS .006 INCHES DAMAGE TO THE WALL OF THE FUEL LINE AND THE SHIELDDING ON THE PUMP WIRING HARNESS WAS CHAFED THROUGH. THERE WAS NO EVIDENCE OF ARCING.
CESSNA CONTROL MISINSTALLED 10/04/2003
550 AILERONS
THE PILOTS CONTROL WHEEL EMITS A GRINDING NOISE WHEN OPERATING THE AILERONS. FOUND THE AFT AILERON CONTROL CABLE WAS FOUND TO BE INCORRECTLY ROUTED INSIDE THE PILOTS CONTROL COLUMN. THE CABLE TENSION WAS LOW AND THE TURNBUCKLE WAS ADJUSTEDD TO THE END OF ITS TRAVEL.
CESSNA AIRBORNE WIRE HARNESS CHAFED 10/15/2003 7553
550 FUEL PUMP
FUEL PUMP WIRING HARNESS IS NOT SUPPORTED WITHIN THE FUEL CELL AND CHAFED ON THE FUEL LINE FROM THE PRIMARY PUMP TO THE CHECK VALVE INSIDE THE FUEL CELL. THERE WAS .006 INCH DAMAGE TO THE WALL OF THE FUEL LINE AND THE PUMP HARNESS SHIELDINNG WAS CHAFED THROUGH. THERE WAS NO EVIDENCE OF ARCING.
CESSNA SKIN DAMAGED 10/17/2003
550 TE FLAP
(CAN)FLAP HAS BEEN REPAIRD ON TWO AREAS ALONG LE. RETURNED AFTER SEVERAL FLIGHTS WITH MAJOR DISBOND BETWEEN CARBON SKIN PLIES AND FOAM CORE ON LWR SKIN AT TE EXTENDING FROM IB CLOSE OUT RIB 60' SPAN WISE AND 13' FWD IN CHORD WISE DIRECTIOON. SOLID LAMINATE TE SKIN HAS ALSO DELAMINATED AT TE 13-3/4' SPAN WISE FROM CLOSE OUT RIB. UPON EXAMINATION OF FLAP, CRACKING HAS ALSO BEEN OBSERVED AT LE IN LOCATION OF FILLET WHERE LE PROFILE MEETS FWD IB ROLLER LUG. CRACKING OF PAINT ON LE OF IB ACTUATOR LUG AT BOND LINE IS ALSO VISIBLE. HOLES IN ACTUATOR MOUNT FOR RETAINING PIN HAVE BEEN OVERSIZED AND ELONGATED. CONTINUING TO EVALUATE THE FULL EXTENT OF DAMAGE. LIKELY CAUSE OF DAMAGE HAS NOT YET BEEN
CESSNA PWA PUMP SCORED 09/25/2003
550 JT15D4 10712 FUEL BOOST
AFTER FINDING CHAFED FUEL BOOST PUMP WIRING ARCING AGAINST MOTIVE FLOW FUEL SUPPLY LINE ON RT SIDE LT FUEL BOOST PUMP WAS ALSO INSPECTED. WIRING ON LT (NO ARCING AT THIS TIME) HAD RUBBED INTO MOTIVE FLOW FUEL SUPPLY LINE TO A POINT THAT SUPPPLY LINE P/N 6526355-37 HAD TO BE REPLACED. ADDITIONALLY ELECTRICAL LINE HAD RUBBED THROUGHT PROTECTIVE COATING ON FLOOR OF FUEL COMPARTMENT NEXT TO BOOST PUMP (P/N 107-12). THIS WAS INSPECTED AND PROTECTIVE COATING REAPPLIED. RECOMEND INSPECT THESE FUEL BAYS. IT MAY BE REQUIRED TO REMOVE MOTIVE FLOW FUEL SUPPLY LINE FOR PROPER INSPECTION. NOTE: RT HAND BOOST PUMP P/N 1C7-12 WAS ORIGNAL AND THE LT HAND PUMP P/N 107-12 WAS A REPLACEMENT PUMP. TIME UNKNOWN AT THIS TIME.

CESSNA	PWA		WIRE HARNESS	CHAFED	09/25/2003
550	JT15D4		652635537	FUEL PUMP	

IN TROUBLESHOOTING A SUBMERGED FUEL BOOST PUMP CIRCUIT BREAKER POPPING, MAINTENANCE TECHNICIANS DISCOVERED THE FUEL BOOST PUMP ELECTRICAL HARNESS HAD CHAFFED THROUGH THE BUNDLE INSULATION AND WAS ARCING ON ALUMINUM FUEL LINE P/N 6526355-37 INSIDE THE WET WING. THE POTENTIAL FOR FUEL VAPOR IGNITION AND AN EXPLOSION.

CESSNA	PWA		MOTOR	BURNED OUT	10/27/2003
S550	JT15D4		MB3BA1	BLOWER	1092

ON 10/25/03 AT APPROXIMATELY 2200Z THE AIRCRAFT DEPARTED ITH FOR PVD WITH 2 CREW AND 5 PASSENGERS. ON CLIMB FROM 10,000 TO FL 190 THE FLIGHT CREW SMELLED SMOKE. AT FIRST NO SMOKE WAS EVIDENT IN THE CABIN, THEN LIGHT SMOKE WAS DECLARED ANDD AN UNEVENTFUL LANDING WAS MADE AT HGA EIGHT MINUTES LATER. MAINTENANCE TROUBLESHOT THE PROBLEM TO A DEFECTIVE CABIN OVERHEAD BLOWER ASSEMBLY. THE MOTOR SMELLED BURNED, BUT DID NOT SHOW AND EVIDENCE OF FIRE DAMAGE. THE 20 AMP CABIN FAN CIRCUIT BREAKER DID NOT POP. THE OVERHEAD BLOWER WAS MEL'D AND THE AIRCRAFT WAS RELEASED. MFG RECOMMENDS 1200 HR OH PERIOD FOR THIS BLOWER MOTOR. MTR HAD APPROX 1100 HRS, REDUCE OH TIME TO 1000 HOURS.(K)

			655771	NR 1 CYLINDER	

CYLINDER FAILED COMPRESSION CHECK DUE TO EXHAUST VALVE LEAKAGE. VISUAL INSPECTION REVEALED BURNED EXHAUST VALVE WITH NO SIGNS OF OVER TEMP OR CARBON BUILD UP. VALVE STEM AND GUIDE WORN BEYOND SERVICE LIMITS. EXHAUST VALVES IN CYLINDERS 44 AND 5 EXPERIENCE IDENTICAL FAILURES AT 247 HOURS TOTAL TIME. PROBABLE CAUSE IS POOR QUALITY CONTROL AT ENGINE BUILD RESULTING IN POOR ALIGNMENT BETWEEN

CESSNA	CONT		SWITCH	INTERMITTENT	11/07/2003
T210N	TSIO520*		P634005	RT MLG	

CONDITION OCCURRED APPROX 3 TIMES UNTIL OPERATOR WOULD NOT FLY UNTIL REPAIRED. AFTER RUN UP A LT TURN WAS NEGOTIATED, DOWN INDICATOR LIGHT WENT (OUT) AND HORN SOUNDED. MAINT DID INITIAL CHECK FOR BROKEN WIRES. SUPPORTED AC, POWER APPLIEDD, SHORT RUN OF GEAR PUMP & LIGHT (ON) NO HORN. PROBLEM COULD NOT DUPLICATED. SEVERAL FLTS AND SAME FAULT WITH SAME RESULT. TROUBLESHOOTING; EACH GEAR DOWN SWITCH REMOVED FROM BRKT, HAND OPERATED SEVERAL TIMES REINSTALLED. FINAL RESULT, KICKING VIBRATION ON ALL GEAR (TIRES) AC ON JACKS, SQUAT SWITCH OUT OF BRACKET, RT GEAR DOWN SWITCH DUPLICATED FAULT. REPLACED SWITCH, ADJUSTED, GEAR CYCLED SEVERAL TIMES, AC RETURNED TO SERVICE.

CESSNA	CONT		CLAMP	BROKEN	10/23/2003
T337G	TSIO360*		S19212	TURBOCHARGER	

FRONT ENGINE TURBO EXHAUST STACK RETAINER CLAMP (TURBINE OUTLET LIP) BAND CLAMP PN S19212 STRAP PORTION FRACTURED AND EXHAUST STACK FELL OFF AIRCRAFT ON TAKEOFF. CLAMP MAY HAVE BEEN CRACKED, AND IT HAD NOT BEEN DETECTED BEFORE FAILURE OCCUURRED. CLOSER VISUAL INSPECTION SHOULD BE INITIATED, DURING ROUTINE INSPECTIONS. OR PART SHOULD BE REPLACED AT ENGINE OVERHAUL.(K)

CESSNA	CONT		DOUBLER	CRACKED	10/02/2003
U206B	IO520F		12120031	BULKHEAD	

(CAN) HORIZONTAL ATTACHMENT POINT DOUBLER FORWARD RT CRACKED AT TOP NUTPLATE RIVET. DOUBLER REPLACED WITH NEW. AREA INSPECTED. NO OTHER FAULTS FOUND. CAUSE IMPROPER GROUND HANDLING

CESSNA	CONT		CAP	FAULTY	10/13/2003
U206F	IO520F		C1560030101	FUEL STORAGE	

(AUS) FUEL CAP PLASTIC SPACER FAILED ALLOWING FUEL TO VENT FROM TANK CAUSING THE FUEL CELL TO COLLAPSE.

CESSNA	CONT		BALANCE	CRACKED	10/13/2003
U206G	IO520F		122008515	AILERONS	

(CAN) UPON INSPECTION IT WAS DISCOVERED THAT THERE WERE SMALL HAIRLINE CRACKS (HORIZONTAL) AT THE THREE MOST OUTBOARD MASS BALLANCE WEIGHT ATTACH SCREW LOCATIONS. APPROX ONE INCH IN LENGTH.

CESSNA	CONT		GPS	MISINSTALLED	07/29/2003
U206G	IO520F			COCKPIT	

(AUS) AGPS AND RADIO TRANSCEIVER REMOVED AND GPS/COM FITTED. AUDIO PANEL REMOVED AND A DIFFERENT ITEM FITTED. SEVERAL DEFECTS FOUND ASSOCIATED WITH INSTALLATION. NO ENTRY IN LOG BOOK, NO WEIGHT AND BALANCE CHANGE, NO ELECTRICAL LOAD ANALYYSIS NO E/O'S IN LOG BOOK INCORRECT COAXIAL CABLE FITTED IAW INSTALLATION MANUAL INCORRECT GPS ANTENNA IAW INSTALLATION MANUAL. NO ADHERENCE TO ACCEPTABLE METHODS 8. SEVERAL INCONSISTENCIES NOW WITH RADIO SYSTEM IE. LABELING WRONG, ABSENCE OF NOTCH FILTERS, SIDETONE ISSUES. NO EVIDENCE OF FLIGHT CHECKING (IAW CAO 108.34) OF MARKER BEACON PERSONNEL/MAINTENANCE ERROR. UNAPPROVED MAINTENANCE.

HINGE				DAMAGED	10/08/2003	127
SR22		IO550N	10332002	AILERON		

INSP ON STOP-TO-STOP TRAVEL OF LT AILERON, NOTICED ODD DOUBLE BUMP SOUND, MVMT AT STOPS. LT WINGTIP, AILERON WERE REMOVED TO FACILITATE FURTHER INSP. IB AILERON HINGE MOVED UP AND DOWN WITH FORCE APPLIED TO IT. VERT MVMT (0.053") WAS MEAASURED APPROX AT BRG IN HINGE ABOUT 5 INCHES AFT OF TWO MNTING BOLTS. TORQUE-SEAL WAS STILL ON NUTS, TORQUE WAS CHECKED FIRST IN TIGHTENING DIRECTION, THEN IN LOOSENING DIRECTION. TORQUE REQUIRED TO TIGHTEN UPPER NUT WAS 75 INCH LBS, AND 55 INCH LBS TO LOOSEN. TORQUE REQUIRED TO TIGHTEN LOWER NUT WAS 40 INCH LBS AND 37 INCH LBS TO LOOSEN. BOLTHOLES IN AILERON HINGE, PULLEY BRACKET, AND FLAP HINGE WERE MEASURED FOR ELONGATION. HOLES WERE NOT ELONGATED; CNDAIR GE PUMP FAILED 10/13/2003

CL6002B19	CF343A1	848847	HYD SYSTEM	

(CAN) HYD NR 2 QUANTITY DROPPED STEADILY DURING FLT. AT LANDING HAD NR 2 QTY AT 25 PERCENT DECLARED EMERGENCY AND LANDED NORMALLY IN ALBANY. PUMP CHANGED, SYSTEM FLUSHED AND FILTERS CHANGED ALL NOW NORMAL

CNDAIR	GE	LANDING GEAR	MALFUNCTIONED	09/04/2003
CL6002B19	CF343B1	NOSE		

(CAN) PILOT REPORTED NOSE GEAR NOT DOWN AND LOCKED. TOWER COULD NOT VERIFY NOSE GEAR DOWN. COMPANY AIRCRAFT DID A FLY BY AND VERIFIED NOSE GEAR DOORS OPEN BUT NOSE GEAR NOT DOWN AND LOCKED. AIRCRAFT WAS RUNNING LOW ON FUEL.CREW DECLARED EMERGENCY AND LANDED WITH THE NOSE GEAR NOT FULLY EXTENDED. CREW REPORTED THEY FOLLOWED QRH PROCEDURES FOR GEAR DOWN DISAGREE.AIRCRAFT TEMPORARILY REPAIRED AND FERRIED FOR PERMANENT REPAIRS.

CNDAIR	GE	APU	SMOKE	09/28/2003
CL6002C10	CF348C1	WE38007703	APU BAY	

(CAN) DURING THE TAKE OFF ROLL, THE SMOKE AFT LAV WARNING MESSAGE BECAME EVIDENT. THE LAVATORY SMOKE ALARM WAS GOING OFF AND THERE WAS A PRESENCE OF SOME SMOKE ACCORDING TO THE FLIGHT ATTENDANT. MAINTENANCE PERFORMED SOME TROUBLESHOOTING ANND IN COMBINATION WITH THE HISTORICAL ASSOCIATION OF THIS ANOMALY WITH A MALFUNCTION IN THE APU ELECTED TO PLACE THE APU ON MEL. THE AIRCRAFT RETURNED TO SERVICE. LATER THE APU WAS REPLACED AND THE MEL WAS REMOVED.

DHAV	PWA		CONTROL ROD	CRACKED	10/03/2003	16887
DHC3	PT6A34		C3CF1709	TE FLAPS		

(CAN) DURING ROUTINE INSPECTION THE FLAP CONTROL ROD (TUNING FORK)WAS FOUND TO HAVE A .70' CRACK RUNNING LENGTHWISE FROM THE THREADED END OF THE ROD.

DHAV	PWA		OIL FILTER	DAMAGED	10/28/2003	
DHC6300	PT6A27		3033315	EXTERNAL		

(CAN) DURING A ROUTINE OIL FILTER CHANGE, THE NEW FILTER WAS VISUALLY INSPECTED AND FOUND TO HAVE 2 WIRE THREADS PROTRUDING FROM THE FILTER. THE ORIGINAL FILTERS WERE VISUALLY INSPECTED AND WERE FOUND TO BEIN THE SAME CONDITION. REFERENCINGG OUR STORES, WE ESTABLISHED THAT THE SUSPECT FILTERS WERE PURCHASED FROM PACE ENTERPRISES IN MARCH 2003 AND WERE FROM BATCH NR 0552. ALL FILTERS PURCHASED FROM THAT P ERIOD, REGARDLESS OF BATCH NR WERE VISUALLY INSPECTED, EITHER FROM STOCK ORFROM AIRCRAFT AND IT WAS FOUND THAT THE ABNORMALITY WAS LIMITED TO THOSE FROM B ATCH NR 0552. THE DISTRIBUTOR WAS INFORMED AND THE SUSPECT PARTS RETURNED.

DHAV	PWA		WHEEL	FAILED	10/11/2003	
DHC6300	PT6A27	9543077	9543077	RIM		

(CAN) ON THE LANDING ROLL, A BANG WAS HEARD AND THEN THE AIRCRAFT LEANED AND TURNED TOTHE RIGHT A BIT. THE CO-PILOT OBSERVED THE RIGHT MAIN TIRE WAS FLAT. THE AIRCRAFT WAS SHUT DOWN AND PASSENGERS AND CARGO WERE OFF-LOADED. A PIECE OF THEE WHEEL RIM WAS FOUND 100 METERS BEHIND THE AIRCRAFT. MAINTENANCE WAS DISPATCHED AND THE AIRCRAFT REPAIRED AND RETURNED TO SEVICE.

DHAV	PWA		RIVET	MISINSTALLED	10/08/2003	15319
DHC6300	PT6A60A			LOWER SPAR CAP		

SMOKING RIVETS OBSERVED AT WS122-140 PROX DURING SCHEDULED INSPECTION. THESE RIVETS ARE CRITICAL TO WING INTEGRITY. IT APPEARS THAT THE RIVETS DID NOT PROPERLY ENGAGE THE HOLE DURING OEM INSTALLATION. SUGGEST ALL WING BOXES WITHIN 10 SERRIAL NUMBER RANGE BE CLOSELY INSPECTED FOR SAME.(K)

DHAV	PWA		TORQUE TUBE	GROOVED	10/23/2003	
DHC8102	PW120A		734382D	TE FLAP		

(CAN) DURING MAINTENANCE IT WAS DISCOVERED THAT THE R/H WING FLAP PRIMARY TORQUE TUBE AT APPROX. WING STN YW 325.00 WAS DEEPLY GROOVED. GROOVE WAS AT ABOUT THE MIDLENGTH OF THE TUBE AROUND ITS CIRCUMFERENCE. TUBE HAD BEEN WEARING ON A NEARBBY ELECTRICAL BUNDLE 'P' CLAMP.TORQUE TUBE REPLACED AND CLAMP ADJUSTED TO GIVE ADEQUATE CLEARANCE.

DHAV		BUSHING		MISSING	10/17/2003	
DHC8301		NAS759011		NLG		

(CAN) ON OCTOBER 9TH 2003 BOMBARDIER DE-HAVILLAND RELEASED IN-SERVICE ACTIVITY REPORT 2003-09. AN ARTICLE IN THIS REPORT REFERENCED A SITUATION WHEREBYDURING MANUFACTURE OF SOME AIRCRAFT, BUSHING P/NO: NAS75-9-011 WAS OMITTEDFROM THE ASSEMBBLE PROCESS OF THE NOSE LANDING GEAR RETRACTION ACTUATORINTO THE AIRCRAFT. ALL OF OUR FLEET AIRCRAFT WERE SUBJECTED TO INSPECTION IN ACCORDANCE WITH THE INFORMATION PROVIDED IN THE IN-SERVICE ACTIVITY REPORT AND AS ARESULT OF THE INSPECTIONS ONE OF OUR A/C WAS FOUND TO HAVE THE BUSHING, AS DESC RIBED, OMITTED DURING ASSEMBLE. DUE TO THE MISSING BUSHING SUPPORT BRACKET P/NO: 85310340-015 WAS FOUND TO BE DAMAGED. NO OTHER DAMAGE WAS IDENTIFIED IN THE WHEEL WELL. THE

DIAMON	CONT		CONTROL	BROKEN	10/23/2003	430
DA20C1	IO240B		2276112100	FUEL MIXTURE		

MIXTURE CONTROL CABLE BROKEN AT THE FIREWALL. THIS IS THE FIFTH ONE TO FAIL ALL AT THIS LOCATION. INSPECTION OF THE 28 AIRCRAFT FLEET REVEALED 16 CABLES WITH A NOTICABLE KINK IN THE CABLE FELT WHEN LEVER IS ACTUATED AND HAND IS WRAPPED AROUUND THE CABLE FORWARD OF THE FIREWALL.

EMB	PWA		LINE	RUPTURED	10/15/2003	
EMB110P1	PT6A34		3011857	FUEL SYS		

(CAN) WHILE CARRYING OUT MAINTENANCE IN THE ACCESSORY SECTION AREA OF THE LT ENGINE (PT6A-34) A STRONG FUEL SMELL WAS NOTICED BY MAINTENANCE. A FURTHER INVESTIGATION REVEALED THAT WITH THE AIRFRAME FUEL BOOST PUMPS SELECTED ON THAT THERE WWAS FUEL SPRAYING FROM A RIGID LINE (FUEL PRESSURE) CONNECTING THE START CONTROL UNIT AND THE FUEL CONTROL UNIT. THE RUPTURE WAS FOUND TO BE AT THE END OF THE LINE ADJACENT TO THE FITTING. THE LINE CAN BE FOUND IN MFG PT6A-34 IPC73-10-03 FIGURE 1 ITEM 20 (LINE P/N 3011857). THE LINE WAS REPLACED, LEAK CHECK ED, AND THE AIRCRAFT WAS RETURNED TO SERVICE. INCLUDED IS AN ILLUSTRATION FROM THE IPC WITH THE AFFECTED LINE IDENTIFIED.

EMB			BUTTON	FAILED	09/26/2003	
EMB145ER				FUEL FILTER		

INDICATOR BUTTON FAILURE OCCURRED (DETAIL PART BROKE IN HALF) ON THREE UNITS AND CRACKS CLEARLY EVIDENT ON TWO OTHERS IN SAME AREA OF BREAKAGE. ONCE BROKEN, A SECTION OF THE BUTTON CAN TRAVEL BEYOND THE SEALED AREA OF THE HOUSING AND HAS TTHE CAPABILITY OF ALLOWING A FUEL LEAK OF UP TO 1.5 GALLONS PER MINUTE. ENGINEERING ANALYSIS INDICATES A LOW CYCLE FATIGUE SITUATION (FATIGUE CRACKS VISIBLE W/MICROSCOPE EXAMIN AT 7-30 POWER). CEP PERFORMED A (FEA) SIMULATING THE BUTTON RESTRAINED IN THE CAP HOUSING WHICH SHOWS THE FAILURE TO BE IN THE LOW CYCLE FATIGUE REGION FOR 7075-T6 ALUMINUM (BUTTON MATERIAL). PRODUCT DELIVERED T HS 813.

ENSTRM	LYC		CONTROL	WORN	10/02/2003	
280C	HIO360*			TAIL ROTOR		

BOTH REAR TAIL ROTOR CONTROLS CABLES WERE WORN WHERE THEY PASS THROUGH PLASTIC FAIR-LEADS IN AFT BULKHEAD OF TAIL BOOM. BOTH WERE WORN TO 40-50 PERCENT INSP CRITERIA. THIS IS BECOMING A CHRONIC PROBLEM AS RECORDS INDICATE THEY WERE REPLACCED 1 MAY 2001, AFT OF 2821.0; 15 MAR 2002, AFT OF 3159.7, 338.7 HOURS TIME IN SERVICE ON THE CABLES; 5 FEB. 2003, AFT OF 3551.1, 391.4 HOURS TIME IN SERVICE; AND NOW, 25 SEP 2003, AFT OF 4043.9, 492.8 HOURS TIME IN SERVICE. CONTRIBUTING FACTORS MAY INCLUDE THE RECOMMENDED TENSION ON THE CABLES AND THAT THE AIRCRAFT IS USED FOR AGRICULTURAL SPRAYING AND THE ACCUMULATION OF DIRT MAY BE ABRASIVE IN THE AREA OF THE FAIR-LEADS. PERHAPS A KIT TO INSTALL PULLEYS IN THAT AREA.

ENSTRM	LYC		CLUTCH	WORN	10/02/2003	4032
280C	HIO360*		28132531	DRIVE BELT		

ON DRIVE BELT CLUTCH MECHANISM, THE SPRING HAD WORN THROUGH THE SIDE OF THE HOUSING FROM MANY HOURS OF RUBBING BACK AND FORTH. THE ABOVE MENTIONED SPRING AND THE SPRING CAP WERE ALSO WORN BEYOND THE INSPECTION CRITERIA IN THE MFG MM. AS FFAR AS WE COULD TELL FROM RESEARCHING RECORDS, THESE ARE ALL ORIGINAL PARTS WITH 4032.1 HOURS ON THEM. PERHAPS REGULAR INSPECTION INTERVALS, 500 TO 1000 HOURS, WOULD CATCH A PROBLEM BEFORE IT BECOMES CATASTROPHIC.

FOUND	LYC		EXHAUST	CRACKED	09/25/2003	
FBA2C	O540A1C5			ENGINE		

(CAN) EXHAUST VALVE IS BURNED, CRACKED IN TWO PLACES, RADIAL FROM CENTRE. SIDES OF VALVE ARE CHIPPED AND MISSING PIECES. FACE OF ROCKER ARM THAT CONTACTS TOP OF EXHAUST VALVE IS BADLY WORN AWAY. THE HARDENEDFACE IS COMPLETELY GONE AND ARM OOF ROCKER ASSEMBLY WAS RIDING ON VALVE SPRING RETAINER WASHER. VALVE RETAINER WASHER ISCRACKED THROUGH IN THREE PLACES. ROCKER ARMS ARE OF SAME CONFIGURATION. SHOULDBE ONE OF EACH TWO DIFFERENT STYLES. CYLINDER NR 4 HAS TWO ROCKER ARMS OF SAME CONFIGURATION, BUT OPPOSITE TO NR 2. ROCKER ARMS WERE NOT INSTALLED CORRECTLY.

GROB	LYC		LEVER	BINDING	09/29/2003	639
G120A	AEIO540D4D5		120A4240	AILERON		

DURING FLEET WIDE INSPECTION, FOUND BEARINGS IN AILERON LEVER 2 ASSY. PN 120A4242 TO BE DAMAGED AND BINDING. DAMAGE APPEARS TO BE CAUSED BY THE BUSHING PN 120A4435.02 IN THE FORK ENDS PN 120A4435.01. IT APPEARS THAT DESIGN LIMITATIONS OFF THE BEARINGS ALLOWING BUSHING TO APPLY EXCESSIVE FORCE ON BEARING DURING FULL DEFLECTION. RECOMMEND REDESIGN OF FLIGHT CONTROL SYSTEM OR REPLACE BEARINGS WITH NEW BEARINGS WITH NEW BEARINGS THAT HAVE GREATER LIMITS.

GROB	LYC	MOTOR	FAILED	09/25/2003	591
G120A	AEIO540D4D5		HYD PUMP UNIT		

DURING FLIGHT TRAINING, GEAR FAILED TO RETRACT. MAINTENANCE TECHNICIAN FOUND THAT THE HYDRAULIC PUMP MOTOR OF THE RETRACT SYSTEM HAD FAILED. PROBABLE CAUSE IS OVERHEATING OF THE HYDRAULIC PUMP MOTOR. RECOMMENDATION IS TO MANUFACTURE TO IINSTALL A HIGHER CAPACITY MOTOR TO OPERATE THE LANDING GEAR SYSTEM.

GROB	LYC	RELAY	SHORTED	10/21/2003	1044
G120A	IO540*	120A9491105AV	MLG		

DURING FLIGHT, GEAR MOTOR WAS SLOW TO EXTEND LANDING GEAR. FURTHER INVESTIGATION DETERMINED THAT EXTENSION VALVE HAD A RESTRICTION IN THE LINE WHICH CAUSED THE LANDING GEAR MOTOR TO REQUIRE MORE CURRENT BECAUSE OF THIS DEMAND IT CAUSED THEE LANDING GEAR RELAY TO SHORT WHICH ALOUD THE CURRENT TO SPIKE THE RELAY AND DIODE BOARD AND SHORT IT OUT. RECOMMENDATION IS TO INSTALL A CIRCUIT PROTECTION DEVICE IN LINE BEFORE THE RELAY AND DIODE BOARD.

GULSTM		DRAIN VALVE	BROKEN	10/28/2003	261
GULFSTREAMGV	79C20H		RT WING		

DURING SUMPING OPERATION OF RT WING HOPPER, THE INTERNAL PIN BROKE, WHICH PREVENTED THE SUMP DRAIN FROM LOCKING IN FLUSH. BY VIRTUE OF THE UNIT BEING ALL PLASTIC, THIS MAY HAVE CONTRIBUTED TO THE PREMATURE FAILURE OF VALVE.

GULSTM	RROYCE	SHUTTLE VALVE	LEAKING	09/03/2003	
GULFSTREAMGV	BR700710A110		HYD SYSTEM		

OXYGEN ACCESS PANEL ON RIGHT SIDE OF FUSELAGE HAD A NOTICEABLE AMOUNT OF SKYDROL-500 ACCUMALATED INSIDE THE ACCESS DOOR OF THE O-2 SERVICE PANEL. IT WAS DETERMINED THAT THE FLUID WAS COMING FROM THE EMERGENCY LANDING GEAR AIR RELEASE VALVEE VENT PORT DUE TO A LEAKING HYD/AIR SHUTTLE VALVE FROM THE LEFT HAND LANDING GEAR SIDE STAY ACTUATOR. THIS VENT IS FORWARD OF THE O-2 SERVICE PANEL. SKYDROL 500B-4 MSDS STATES - MATERIALS TO AVOID EXPOSURE TO STRONG OXIDIZING AGENTS. WE ADDRESSED THIS SAME PROBLEM ON A/C G-V S/N 584 IN AUGUST OF THIS YEAR.

HUGHES	ALLSN	EXHAUST	CRACKED	09/28/2003	1627
369FF	250C30	369D2860501	ENGINE		

THE EXHAUST STACK HAD TO BE REPAIRED SEVERAL TIMES SINCE 400.0 HOURS SINCE NEW. NOW THE AC HAS 1627.3 HOURS TT. SERVICE REPORTS WAS DONE TO MFG SINCE 12-2000. IN 3 OCCASIONS THE MFG SENT THE EXHAUST PN 369D2860501 FOR REPLACEMENT, BUT ITT DID NOT FIT INTO THE AIRCRAFT. IN THE MEANTIME, IT CONTINUED CRACKING AND WE CONTINUED TO REPAIR.

ISRAEL	GARRTT	PUMP	LEAKING	10/21/2003
ASTRASPX	TFE73140	30607591	FUEL SYSTEM	

(CAN) ASTRA SPX SN 079 EXPERIENCED A STRIPPED FUEL LINE FITTING ON THE RT ENGINE MOTIVE FLOW PUMP INLET PORT. FOUND DURING THE ENGINEER'S MORNING POST-FLIGHT INSPECTION, 21 OCT 2003. THE AIRCRAFT EXPERIENCED HEAVY TURBULENCE THE PREVIOUS NIIGHT,THOUGH THIS IS NOT CONSIDERED THE CAUSE OF THE FAILURE, IT MAY HAVE CONTRIBUTED TO THE FINALITY OF IT. FUEL PUMP REPLACED AND AIRCRAFT RETURNED TO SERVICE.

LEAR	GE	STARTER	VIBRATION	07/11/2003	
25D	CJ6106	30B3749BT	ENGINE	333	

WHILE IN CRUISE FLIGHT AT 370, THE FLIGHT CREW HEARD TWO FLUTTERING VIBRATION SOUNDS. THE VIBRATION NOISES BECAME LOUDER AND LOUDER. ADJUSTING THE THROTTLE ISOLATED THE VIBRATION TO THE NR 1 ENGINE. THE PILOTS DESCENDED TO FL 250 AND SHUUT DOWN THE NR 1 ENGINE. A SINGLE ENGINE APPROACH AND LANDING WAS MADE AT FORT LAUDERDALE INTERNATIONAL AIRPORT. THE MAINTENANCE DEPT TROUBLE SHOT AND DISCOVERED THAT THE NR 1 ENGINE STARTER GENERATOR HAD FAILED AND WAS THE SOURCE OF THE VIBRATION. THE STARTER GENERATOR WAS REPLACED AND OPERATIONALLY CHECKED AND THE AIRCRAFT WAS RETURNED TO SERVICE.

LEAR	GARRTT	ATTACH BOLT	CORRODED	10/29/2003	866
45LEAR	TFE731*	4576101000V170	THROTTLE CABLE		

UPON REPLACEMENT OF THRUST LEVER MODULE FOUND BOTH BOLTS ATTACHING THROTTLE CABLE CLEVIS TO THROTTLE MODULE CORRODED IN A HANK AREA WHERE BOLT PASSES THROUGH ROD END BEARINGS. HAD TO DRIVE BOLTS OUT WITH PUNCH TO REMOVE. UPON REMOVAL FOUNND BOTH BOLTS DRY WITH NO VISIBLE LUBRICATION. ONE BOLT PITTED IN SHANK AREA. ORDERED TWO NEW BOLTS FROM MANUFACTURER AND FOUND THAT NEITHER ORIGINAL BOLT WAS CORRECT SHANK LENGTH WHEN COMPARED WITH NEW BOLTS.

LET	SPRING		BROKEN	10/03/2003	530
L23	A740224N		TOW RELEASE	530	

PILOT REPORTED RELEASE HANDLE WOULD NOT RETRACT. MAINTENANCE FOUND UPON INSPECTION PART OF SPRING BROKEN. THREE ADDITIONAL SAILPLANES DEVELOPED THIS PROBLEM AT ABOUT SAME TIME IN SERVICE

MOONEY	LYC	DUKES	WORM GEAR	STRIPPED	09/27/2003	206
M20J	IO360A1A		41961000	ACTUATOR		

LANDING GEAR UNLOCKED BUT FAILED TO RETRACT AFTER TAKEOFF. ATTEMPS TO EXTEND GEAR TO DOWN AND LOCKED ELECTRICALLY AND MANUALLY WERE UNSUCCESSFUL. GEAR COLLAPSED UPON LANDING. INVESTIGATION REVEALED THAT THE RECENTLY REPLACED WORM AND DRIIVE GEARS INSIDE THE LANDING GEAR ACTUATOR WERE WORN AND STRIPPED. THE GEARS WERE REMOVED AND CASE TESTED FOR HARDNESS. TEST RESULTS REVELED THAT THE GEARS WERE SOFT AND BELOW MANUFACTURERS SPECS. SUSPECT GEARS WERE IMPROPER OR NEVER HEAT TREATED. (GL17200303131) (K)

MOONEY	LYC	ROD END	BROKEN	08/13/2003	528
M20M	TIO540AF1B	M3414MPB	RT AILERON		

PLANE CAME IN FOR ANNUAL. CUSTOMER REPORTED AILERON CONTROL STIFF. UPON MOVING YOKE TO CONFIRM STIFFNESS. RT AILERON ROD END AT AILERON BROKE. IT BROKE WHERE THREADED PORTION MEETS BEARING. REMOVED ROD END AND FOUND BEARING WAS FROZEN. ALL MOVEMENT WAS IN THE THREADS WHICH WEAKENED IT AND FINALLY BROKE. THE WAS NO EVIDENCE OF RUST OR ANYTHING. AIRPLANE IS KEPT OUTSIDE AND LACK OF LUBRICANT IS SUSPECTED. OTHER SEAMED OKAY BUT WAS REPLACED ANYWAY.

PIAGIO	PWA	SHUTOFF VALVE	LEAKING	10/24/2003
P180	PT6A66	EM4843	FUEL SYSTEM	

(CAN) THE ENGINE COWLS WERE REMOVED FOR 150 HOUR INSPECTION AND A SMALL AMOUNT OF FUELWAS FOUND IN THE BOTTOM RIGHT COWL. WHEN THE RT FUEL BOOST PUMP WAS TURNED ON TO LOCATE THE SOURCE FUEL WAS OBSERVED DRIPPING AT ABOUT 1 DROP PER 2 SECONNDSFROM THE RIGHT ENGINE FIREWALL SHUTOFF VALVE. THE LEAK WAS FROM THE ACTUATOR END NOT THE MAIN BODY. FAA AIRWORTHINESS DIRECTIVE 2003-17-03 HAD BEEN COMLIED WITH THE VALVE HAD BEEN MODIFIED AS PER ELECTROMECH SB 484-3AB.

PIPER	LYC	FUEL CAP	MALFUNCTIONED	10/01/2003
PA22150	O320*	U60750002	TANK	

NEW FUEL CAP DID NOT VENT. FUEL TANK WAS PARTIALLY COLLAPSED AND SPEWING SOUND WAS COMING FROM THE CAP. CAP WAS TURNED FOR REMOVAL AND WHEN THE INDENTS RELEASED THE CAP, THE TANK POPPED BACK UP IN PLACE. THE CAP DOES NOT SHOW ANY DEFORMAATION OR DAMAGE, IT APPEARS NORMAL IN ALL RESPECTS. SUGGEST A TESTING PROCEDURE BE DEVISED BEFORE THESE CAPS ARE INSTALLED.

PIPER LYC FUEL CAP INADEQUATE 10/09/2003
PA22150 O320* U60750002 FUEL CELL
FUEL CAP DID NOT VENT. THE FUEL CAP WAS RETURNED TO MFG AND THEY REPORTED THE CAP TO BE VENTING PROPERLY. MFG REPLACED THE CAP AND THE REPLACEMENT REFUSED TO VENT. ON THE GROUND THERE APPEARS TO BE ADEQUATE VENTING CLEARANCE BETWEEN THE FILLER NECK WASHER AND THE CAP VENT HOLES. HOWEVER, IN FLIGHT SOMETHING MOVED AND THE FILLER NECK GASKET SEALED THE VENT HOLES IN THE FUEL CAP. IN SOME INSTANCES THE FILLER NECK DOES NOT EXTEND HIGH ENOUGH ABOVE THE TANK AND FILLER NECK WASHER TO PREVENT THIS SEALING EFFECT. SUGGEST MODIFICATION OF THE CAP VENT HOLES TO PREVENT THIS TYPE OF

PIPER LYC SPAR CRACKED 09/15/2003 6249
PA23160 O320* 1706702 VERTICAL STAB
DURING COMPLIANCE WITH AD 78-08-03, FOUND CRACKS IN THE UPPER HINGE REINFORCEMENT BRACKET (PN 17067-18) OF THE VERTICAL STABILIZER. REMOVAL OF THE BRACKET WAS PERFORMED AND A CLOSE INSPECTION OF THE BOLT HOLES IN THE REAR SPAR FOR THE UPPEER RUDDER HINGE CASTING REVEALED SIMILAR CRACKS THERE ALSO.

PIPER LYC COUPLING MISMANUFACTURE 10/08/2003
PA23250 TIO540C1A 557584 TURBO OUTLET
EXHAUST V-BAND COUPLING NEEDED FOR TURBOCHARGER OUTLET/ TAILPIPE CONNECTION ON THIS AC. ORIGINAL PN 555-511 WAS SUPERSEDED BY MFG TO THE PN 557-584 WILL NOT WORK. THE COUPLING GAP FULLY CLOSED AND BOTTOMED OUT BEFORE ADEQUATE TORQUE WAS RREACHED. CONTACTED MFG REP, ENGINEERING AGREED THE PN 557584 IS NOT A VALID REPLACEMENT FOR THE PN 555-511, AND RECOMMENDED USE OF THE ORIGINAL COUPLING.(K)

PIPER LYC TUBE CRACKED 10/08/2003 4936
PA24250 O540* 2101203 MLG RETRACT
LANDING GEAR RETRACTION TUBE INBOARD ARM FRACTURED ABOVE THE ATTACHMENT POINTS FOR THE NOSE AND RIGHT MAIN AND NOSE GEAR COLLAPSED ON LANDING. VISUAL INSPECTION OF THE PART INDICATED A PORTION OF THE FRACTURE COULD HAVE OCCURRED AT AN EARLLIER DATE. CAUSE OF THE FRACTURE UNKNOWN. THE PART IS VERY DIFFICULT TO INSPECT DUE TO THE LOCATION IN THE AIRFRAME.(K)

PIPER LYC TORQUE LINK CRACKED 10/04/2003
PA28140 O320* 633062 MLG
DURING INSP OF MLG IAW SB 1131, DISCOVERED CRACK IN MLG TORQUE LINK. FURTHER NDI REVEALED ALL (4) TORQUE LINKS CRACKED (PN 633062) EXACTLY AS INDICATED IN FIG 1 OF SC600. THE TORQUE LINKS WERE NOT BEING INSPECTED IAW AD BECAUSE THE AD CIITES PN 6569100 OR 65691002 AS THE ONLY ONES TO BE INSPECTED. MFG SL600 DIRECTS TORQUE LINKS TO BE INSPECTED BY AC SERIAL NR AND BY PN (IF) TORQUE LINKS HAVE BEEN REPLACED. AD DOES NOT COVER THE FULL SPECTRUM OF TORQUE LINKS AS THE SL INTENDS TO COVER. THERE IS A DISPARITY BETWEEN THE AD AND LS AND ALL THE LINKS ARE NOT BEING INSPECTED AS THE SL ORIGINALLY INTENDED THEM TO BE. REVISE AND

PIPER LYC SPAR CAP CORRODED 10/09/2003 4407
PA28140 O320* 656015 RT WING
RT WING REPLACED. EXISTING WING HAD EXFOLIATION CORROSION IN BOTTOM SPAR CAP AT INBOARD REAR OF FUEL TANK. THERE IS NO ACCEPTABLE REPAIR. CORROSION IS VISIBLE ONLY WHEN FUEL TANK IS REMOVED.

PIPER LYC MOUNT CRACKED 09/25/2003
PA28140 O320* AIL BELLCRANK
LEFT WING AILERON BELLCRANK MOUNT HOUSING IS CRACKED ON FWD HORIZONTAL FLANGE AT MOUNT BOLT LOCATION. TTAF 5665.7

PIPER LYC SEAT CRACKED 10/09/2003 4233
PA28140 O320E2D 9681400 CABIN 6
SEATS WERE REMOVED, UNUPHOLSTERED, STRIPPED OF ORIGINAL PAINT FOR REPAINTING. UPON INSP OF LT AND RT FRONT SEATS BEFORE PRIMING AND REPAINTING, CRACKS APPROX. 270 TO 320 DEGREES AROUND WERE DETECTED FROM WELDS AT SUPT BRKTS CONNECTING UPPERR TUBULARS OF SEAT FRAME. RT SEAT WOULD HAVE SEPARATED AT FRONT BRKTS CAUSING FRONT PASSENGER TO FLING BKWD WITHOUT NOTICE. LT SEAT HAD ONLY ONE CRACK, LT UNDETECTED MAY NOT HAVE CAUSED PILOT TO FLING BKWD BUT WOULD CAUSE PRESSURE ON OPPOSITE SEAT FRAME SUPPT BRKTS AND WOULD LEAD TO CRACKS. REPAIR/ GRIND OUT CRACKS AND WELD (TIG OR OXY/ACET GAS) BY AN AUTHORIZED INDIVIDUAL, OR REPLACEMENT OF SEAT FRAMES. THESE PARTICULAR CRACKS WERE WELDED AND 337'S

PIPER LYC FRAME CRACKED 04/25/2003
PA28140 O320E3D CABIN SEAT
(CAN) THIS FORWARD CABIN SEAT AND SOME SEATS IN OTHER SAME MODEL AIRCRAFT (PIPER PA28), DUE TO THEIR AGE, HAVE WEAKENED AND CRACKED AT WELDED JOINTS. THE MOST COMMON LOCATON HAS BEEN THE WELDED JOINT BETWEEN THE SEAT CUSHION FRAME AND THE ''S' BEND SUPPORT TUBE. THE OPPOSITE END OF THIS SUPPORT TUBE IS ALSO WELDED TO THE SEATLOWER TUBULAR FRAMEWORK WHICH IS STRONG ENOUGH NOT TO CRACK. ALTHOUGH THE SEATISSTILL STYRONG ENOUGH TO BEAR THE WEIGHT OF THE PILOT/PASSENGER EVEN WITH BOTHTHE LEFT AND RIGHT SUPPORT TUBE FAILURE, THE DANGER IS AS FOLLOWS:WITH BOTH SUPPORT TUBES FAILED, IF THE PILOT WOULD LEANBACK WITH ENOUGH REARWARD FORCE ON THE SEAT BACK, THE SEAT WILL DISENGAGE FROM THE SEAT TRACKS INADVERTENTLY AND SL

PIPER LYC LINK ASSY CRACKED 09/25/2003 3068
PA28180 O360* 6338300 MLG
THE PROBLEM EXISTS WITH PN 6338300.THE ONLY DIFFERENCE WITH THE TWO PARTS IS THAT THERE IS A STIFFENER INSTALL IN THE 6541300. THE STIFFENER INSTALL PREVENTS THE COLLAPES OF THE BUMPER MOUNT WHICH IN TURN SPREDS THE LINK SIDE CHANNELS WHICCH THEN CAUSES THE LINK TO CRACK. THIS IS WHAT HAPPENED TO THE 6338300 ON ACFT 283537. I FEEL THAT THE 6338300 SHOULD BE EITHER RECALLED, OR MODIFIED TO A 6541300,OR AT LEAST INSPECTED TO SEE IF THIS FAILURE EXISTS IN THE FIELD. FAILURE OF THIS LINK IS A LIFE THREATENING CONDITION.

PIPER LYC FASTENER UNDERTORQUED 04/18/2003 4092
PA28181 O360A4M VERTICAL STAB
AIRCRAFT OWNER REQURESTED THAT WE CHECK TORQUE ON BOLTS SECURING VERTICAL FIN TO TAILCONE BULKHEAD. FOUND ALL VERTICAL FIN ATTACH HARDWARE UNDER TORQUED. INSPECTED HARDWARE AND MOUNTING HOLES. FOUND NOT PERFECT. REINSTALLED BOLTS AND TOORQUED TO MFG SPECIFICATIONS.

PIPER LYC CONTROL MALFUNCTIONED 09/02/2003
PA28R180 IO360A1A 676658,57002 FIREWALL
ALTERNATE AIR CABLE WRAPPED AROUND NOSE GEAR WHEN RETRACTED AFTER TAKE-OFF. ROUTING OF CABLE BOTTOM RIGHT OF FIREWALL UP AND AROUND GEAR INDENTATION ON FIREWALL. IF CABLE COMES LOOSE IT WILL WRAP AROUND NOSEWHEEL TIRE. REROUTING OF CABLLE ABOVE NOSE GEAR TO AIR BOX AND MOUNT WITH MS-21919 CLAMPS WILL ELIMINATE THIS FROM HAPPENING. I WOULD SUGGEST PULLING REPORTS ON REPETITIVE PROBLEMS AND ALSO HAVING MFG ISSUE SERVICE BULLETIN ON ALTERNATE ROUTING OF THE CABLE, AWAY FROM THE GEAR WELL. I WOULD APPRECIATE BEING KEPT INFORMED OF FUTURE ACTION.

PIPER LYC ENGINE FAILED 10/10/2003
PA31 TIO540A2C LEFT
(CAN) IN CRUISE THE LT ENGINE LOST POWER FOR APPROXIMATELY 5 MINUTES, THEN RESTARTED. THE ONLY INDICATION WAS A LOSS OF M.P. TO 20' AND A YAW TO THE LEFT. THE LT PROP WAS FEATHERED BUT CONTINUED TO ROTATE SO THE PILOT FELT THE ENGINE WAS STTILL RUNNING AND UNFEATHERED THE PROP AT WHICH TIME SHORTLY AFTER THE ENGINE REGAINED POWER. IN THE PROCESS OF

TROUBLESHOOTING, THE FUEL WAS SELECTED TO INBOARDS FROM OUTBOARDS. A COMPLETE INSPECTION OF THE TURBO CHARGER, INDUCTION SYSTEM AND FUEL DELIVERY SYSTEM WAS CARRIED OUT ALONG WITH SAMPLES OF FUEL FROM THE TANKS AND NO PROBLEM COULD BE FOUND. THE AIRCRAFT WAS TEST FLOWN FOR 30 MIN WITH NO FURTHER PROBLEMS.

PIPER		BOLT	BROKEN	09/24/2003	
PA32R301			RT MLG		

WHILE PERFORMING A NON RELATED MAINTENANCE GROUND RUN, ON THE TAXI BACK TO THE HANGER A VIBRATION OCCURED FROM THE RT MAIN LANDING GEAR. AFTER SHUT DOWN AN INSPECTION OF THE RT MAIN GEAR ASSEMBLY FOUND THE BOLT (PN 691308) HOLDING THE TWO TTORQUE LINKS TOGETHER WAS BROKEN. THE BOLT HALVES WERE FROZEN INTO THE LINK AND WOULD NOT TURN, DUE TO INADEQUATE LUBRICATION. AFTER REMOVAL, THE BOLT WAS INSPECTED AND FOUND TO RUSTED OVER HALF WAY ACROSS THE DIAMETER OF THE BOLT. THE BOL T TIME SINCE NEW

PIPER	LYC	BOLT	MISSING	10/03/2003	961
PA32R301T	TIO540AE2A	LW38075	TURBOCHARGER		

THE HARDWARE ATTACHING THE TURBOCHARGER SCAVANGE SUMP TO THE TURBOCHARGER BECAME LOOSE ALLOWING LARGE QUANITY OF OIL TO LEAK FROM THE ENGINE OIL SYSTEM. ONE BOLT WAS MISSING. A FORCED LANDING WAS NECESSARY. THIS ENGINE HAD BEEN DISASSEMBBLED, REPAIRED AND REASSEMBLED BY MFG FOR COMPLIANCE WITH AD 2002-19-03, ON 03/17/03 AT 699.6 HOURS. WE RECOMMEND WING PAR NR LW-38HO.25. BOLTS WHICH HAVE DRILLED HEADS AND SECURE WITH LOCKWIRE.(K)

PIPER		TURNBUCKLE	CORRODED	10/31/2003	2633
PA32RT300T		MS21260S4LH	ELEVATOR CABLE		

PILOT DEPARTED SMALL AIRPORT AND CLIMBED TO 1000 FT. WHEN THE PILOT LEVELED HIS ALTITUDE, HE REALIZED THAT HE HAD LOST MOST ALL OF HIS ELEVATOR CONTROL. HE PERFORMED EMERGENCY LANDING USING ELEVATOR TRIM. UPON INVESTIGATION, FOUND THAT A TURNBUCKLE IN AN ELEVATOR CONTROL CABLE HAD BROKEN. THE BREAK WAS DUE TO CORROSION LOCATED BELOW THE SAFETY WIRE WRAPS. OTHER TURNBUCKLES IN THE AREA (APPROX 1 FT) WERE NOT CORRODED. IT IS BELIEVED THAT A VENTILATION HOSE THAT WAS DIRECTLY ABOVE THE AFFECTED TURNBUCKLE CONTRIBUTED TO THE CORROSION BY ALLOWING CONDENSATION TO DRIP DOWN ONTO THE

PIPER	CONT	CLEVIS BOLT	BROKEN	10/28/2003	
PA36285	6285A		STAB STRUT		

THE UPPER HORIZONTAL STABILIZER STRUT CLEVIS BOLT BROKE. THE BREAK WAS IN THE THREADED SECTION. THE AIRCRAFT TT IS 5998 HRS. THE SAME TIME IN SERVICE FOR THIS CLEVIS BOLT. THIS IS THE SECOND TIME HAVE FOUND A CLEVIS BOLT BROKEN IN THIS LLOCATION, ON THIS MODEL AIRCRAFT. THIS LOCATION IS NORMALLY SO CONTAMINATED THAT A NORMAL, VISUAL INSPECTION IS NOT PRACTICAL. EVEN WITH A THOROUGH CLEANING THE BREAK MIGHT NOT HAVE BEEN DETECTED. THE BREAK HAD RUST IN A PARTIAL BREAK BEFORE THE FINAL FAILURE. SUGGEST FREQUENT AND THOROUGH INSPECTIONS OR A REDESIGNED CLEVIS BOLT FOR THIS LOCATION.

PIPER	LYC	SHROUD	CRACKED	04/21/2003	126
PA44180	IO360E1A	8743602	RT ENG EXHAUST		

THE CARB HEAT SHROUD ASSY (PN 8743602) FOR THIS AIRCRAFT SEEMS TO BE MANUFACTURED POORLY. WE SEEM TO HAVE AN UNUSUAL FAILURE RATE WHERE THE FORWARD ATTACH CLAMP IS WELDED TO THE SHROUD ASSEMBLY. WE HAVE CHANGED THIS PART 8 TIMES SINCE ENGGINE INSTALLATION FOR A DEFECT IN THIS WELDED AREA. THE FOLLOWING IS A HISTORY TIMELINE OF HOURS AND DATES REPLACED. NEW 28 MAR 98 TT 0.0 HOURS, REPLACED 22 SEPT 98 TOTAL 100.0 HOURS, REPLACED. 21 JUL 01, TT 551.7 HOURS, REPLACED 22 APR 03, 677.7 HOURS I HAVE NO RECOMMENDED REPAIR OR DESIGN CHANGE THAT WOULD REMEDY THIS PROBLEM. (CE03200308406)

TCRAFT	CONT	CONTROL	BROKEN	10/17/2003	
BC12D	A65*		BRAKE		

LEFT BRAKE PEDAL CABLE BROKE APPROXIMATELY 10 INCHES AFT OF BRAKE PEDAL.

UNIVAR		SPAR CAP	CORRODED	11/01/2003	1487
415C			RT & LT WING		

WHEN PERFORMING INSPECTION REQUIRED BY PARAGRAPH (A)OF AD94-18-04 R1 FOUND SEVERE INTERGRANULAR CORROSION IN BOTH LT AND RT LOWER SPAR CAPS. CORROSION WAS LOCATED 6 INCHES FROM INBOARD END OF LOWER SPAR CAP TO 18 INCHES FROM INBOARD END. COORROSION HAS PENETRATED THE UPPER SURFACE OF THE SPAR CAPS. THE CORROSION HAS ADVANCED TO EXFOLIATION AND LIFTING OF THE SURFACE HAS OCCURRED. PITTING CORROSION HAS ALSO FOUND ON THE WING SPAR WEB IN THE AREA OF THE CORROSION ON THE SPAR CAPS. THE AIRCRAFT IS A 1946 MODEL AND IT APPEARS THAT THE SPARS ARE ORIGINAL.

UNIVAR	RIB	CORRODED	10/03/2003	
415C	41513017L	FUSELAGE		

DURING INSPECTION REQUIRED BY AD 2002-26-02 USING METHOD 1 AND METHOD 3, CORROSION WAS DISCOVERED IN THE VICINITY OF THE PILOT'S SIDE INBOARD RIB P/N 415-13017L THIS CORROSION CANNOT BE SEEN USING THE WING REMOVAL METHOD OF INSPECTION. HOWEEVER USING THE INSPECTION OPENING METHOD OF INSPECTION, CORROSION BEHING THE FUEL TANKS, IN THE VICINITY OF THE WING ATTACH FITTINGS, AND THE SPAR CAPS CANNOT BE SEEN ADEQUATELY. I FEEL THAT BOTH METHOS 1 AND 3 ARE NEEDED TO PREFORM AN ADEQUATE INSPECTION. THIS IS THE SECOND PLANE I HAVE DISCOVERED CORROSION THAT WAS NOT DETECTED BY WING REMOVAL ALONE.

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UROCOP	TMECA	FRAME	CRACKED	09/02/2003	1976
EC135T1	ARRIUS2B1	L535A1101052	TAILBOOM		

PART CRACKED AT 90 DEGREES BEND RADIUS FROM APPROX 5 O'CLOCK POS. TO THE 10 O'CLOCK POS. BEFORE IT CRACKED TO THE OUTER SURFACE WHERE IT WAS NOTICED DURING A DAILY INSPECTION. PROBABLE CAUSE MAY HAVE BEEN AN EARLIER GROUND BUMPING INCIDEENT THAT CAUSED OTHER DAMAGE TO THE AIRCRAFT. RECOMMENDATIONS TO PREVENT RECURRANCE WOULD BE TO CHOSEY INSPECTION. THIS AREA AFTER ANY TAIL

UROCOP	TMECA	SWITCH	FAILED	09/18/2003	513
EC155B	ARRIEL1	945UN01Q4AF8	START		

DURING A TEST RUN FOLLOWING AN ENGINE CHANGE OF THE NR 1 ENGINE, THE NR 1 ENGINE FAILED TO RETURN TO IDLE WHEN THE NR 1 START SWITCH WAS BROUGHT FROM FLIGHT TO IDLE POSITION. SUBSEQUENT TROUBLE-SHOOTING FOUND THAT THE SWITCH WOULD ALSO FAIIL FROM IDLE TO FLIGHT POSITIONS. THIS CONDITION, IF NOT REALIZED BY THE FLIGHT CREW, COULD RESULT IN AN UNDERPOWERED SINGLE ENGINE TAKE-OFF. THIS IS NOT THE FIRST FAILURE OF THIS TYPE WITH THIS SWITCH.

OMB No. 2120-0003

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

MALFUNCTION OR DEFECT REPORT

OPER. Control No.	
ATA Code	
1. A/C Reg. No.	N-

Enter pertinent data	MANUFACTURER	MODEL/SERIES	SERIAL NUMBER
2. AIRCRAFT			
3. POWERPLANT			
4. PROPELLER			

5. SPECIFIC PART *(of component)* CAUSING TROUBLE

Part Name	MFG. Model or Part No.	Serial No.	Part/Defect Location.

6. APPLIANCE/COMPONENT *(Assembly that includes part)*

Comp/Appl Name	Manufacturer	Model or Part No.	Serial Number

Part TT	Part TSO	Part Condition	7. Date Sub.

8. Comments *(Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)*

Optional Information:

Check a box below, if this report is related to an aircraft

☐ Accident; Date _____ ☐ Incident; Date _____

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SUBMITTED BY:

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